

This is the entire search history. Each answer set has its own query display

EPPERSON 10/071,707

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(FILE 'HOME' ENTERED AT 11:41:57 ON 02 MAY 2003)

FILE 'HCAPLUS' ENTERED AT 11:42:07 ON 02 MAY 2003

L1 107 S OSTRESH J?/AU  
L2 5423 S YU Y?/AU  
L3 1022 S HOUGHTEN R?/AU  
L4 6440 S L1-3  
L5 19 S L4 AND ?TRIAZIN?  
L6 5 S L5 AND "1,3,5-TRIAZINE"  
L7 5 S L5 AND "1,3,5-TRIAZINO"  
L8 9 S L6-7  
L9 1 S L8 AND "2,4,6-TRIONES" /  
SELECT RN L9 1

inventor search

FILE 'REGISTRY' ENTERED AT 11:45:54 ON 02 MAY 2003

L10 37 S E1-37  
L11 22 S L10 AND NCNCNC/ES  
SAVE L11 TEMP EPP707INV/A

FILE 'HCAPLUS' ENTERED AT 11:47:10 ON 02 MAY 2003

L12 1 S L9 AND L10

FILE 'STNGUIDE' ENTERED AT 11:48:52 ON 02 MAY 2003

FILE 'ZCAPLUS' ENTERED AT 11:51:07 ON 02 MAY 2003

E COMBINATORIAL/CT  
E COMBINATORIAL LIBRARY+ALL/CT  
E COMBINATORIAL CHEMISTRY+ALL/CT  
E HIGH THROUGHPUT SCREENING+ALL/CT  
E SOLID PHASE SYNTHESIS+ALL/CT

FILE 'HCAPLUS' ENTERED AT 11:53:38 ON 02 MAY 2003

L13 4501 S SOLID PHASE SYNTHESIS+PFT/CT  
E HIGH THROUGHPUT SCREENING+PFT/CT  
L14 1709 S HIGH THROUGHPUT SCREENING+PFT/CT  
L15 2142 S COMBINATORIAL CHEMISTRY+PFT/CT  
L16 4858 S COMBINATORIAL LIBRARY+PFT/CT  
L17 4946 S 28-19/SC, SX  
L18 11 S L14-16 AND L17  
L19 11 S L18 AND ?TRIAZIN?  
L20 1 S L19 AND ?TRION? ← all are  
L21 56 S L14-16 AND ?TRIAZIN? inventor cite  
L22 2 S L21 AND ?TRION? L12  
L23 1 S L22 AND ?TRIAZIN?(3A)?TRION?  
L24 1 S L13 AND ?TRIAZIN?(3A)?TRION?

index  
searching

FILE 'LREGISTRY' ENTERED AT 12:01:59 ON 02 MAY 2003

L25 STR

FILE 'REGISTRY' ENTERED AT 12:05:18 ON 02 MAY 2003

L26 3 S L25  
L27 54 S L25 FULL ← parent str search  
SAVE L27 EPP707P/A  
SAVE L27 EPP707P/A TEMP  
L28 22 S L11 AND L27  
L29 32 S L27 NOT L28  
L30 20 S L29 NOT PMS/CI

L31 FILE 'LREGISTRY' ENTERED AT 12:09:39 ON 02 MAY 2003  
STR L25

L32 FILE 'REGISTRY' ENTERED AT 12:13:41 ON 02 MAY 2003  
3 S L31 SSS SAM SUB=L27  
L33 53 S L31 SSS FUL SUB=L27 ← subset search  
L34 1 S L27 NOT L33  
SAVE TEMP L33 EPP707S1/A

L35 FILE 'HCAPLUS' ENTERED AT 12:15:30 ON 02 MAY 2003  
29 S L33 29 cites for L33 cpds  
(L36 28 S L35 NOT L9 ← subtracting out applicant  
L37 0 S L36 AND L14-16  
L38 0 S L36 AND (COMBINATOR? OR LIBRAR? OR THROUGHPUT)  
L39 0 S L36 AND SOLID PHASE

FILE 'REGISTRY' ENTERED AT 12:22:50 ON 02 MAY 2003

FILE 'HCAPLUS' ENTERED AT 12:23:03 ON 02 MAY 2003  
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L40 1 S L20 OR L23-24  
L41 0 S L40 NOT L9 } text search

(L42 FILE 'CAOLD' ENTERED AT 12:28:22 ON 02 MAY 2003  
2 S L33 2 cites

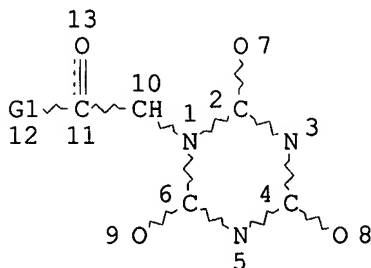
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L43 FILE 'BEILSTEIN' ENTERED AT 12:33:58 ON 02 MAY 2003  
0 S L31  
L44 4 S L31 FUL 4 cpds

=&gt; d que 135

L25

STR parent STR



O@14

OH / O-metal

VAR G1=NH2/14

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 14

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 14

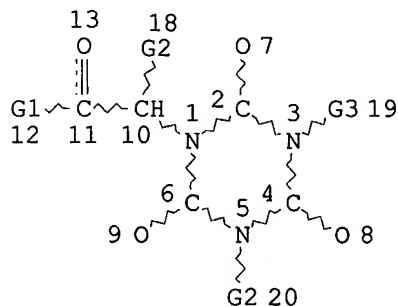
STEREO ATTRIBUTES: NONE

L27

[54 SEA FILE=REGISTRY SSS FUL L25] 54 cpds

L31

STR subset STR



O@14

Cb@17 Ak@15

↑  
aryl

cycloalkyl

} can be  
substituted

VAR G1=NH2/14

VAR G2=H/15/17

VAR G3=17/15

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 14

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L33

[53 SEA FILE=REGISTRY SUB=L27 SSS FUL L31] 53 cpds

L35

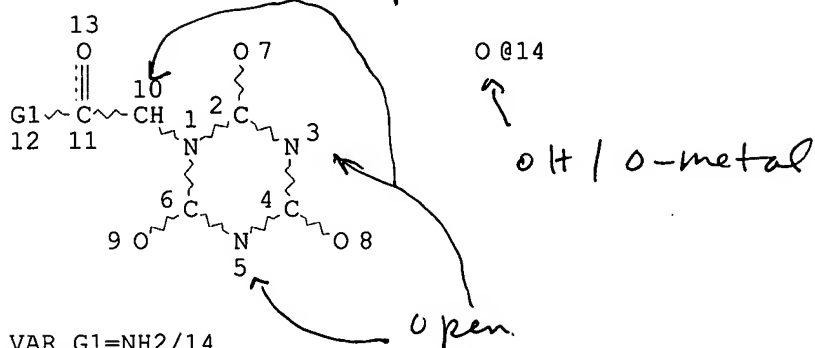
29 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 29 cites in HCAPLUS

# Registry / CA OLD Searches

EPPERSON 10/071,707

=> d que 142  
L25

STR / parent str



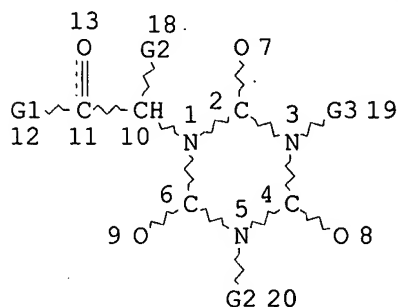
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VAR G1=NH2/14  
NODE ATTRIBUTES:  
CONNECT IS E1 RC AT 14  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L27 54 SEA FILE=REGISTRY SSS FUL L25 54 cpds  
L31 STR Subset search



O@14 Cb@17 Ak@15 can be substituted  
↑  
aryl or carbocycle

VAR G1=NH2/14  
VAR G2=H/15/17  
VAR G3=17/15  
NODE ATTRIBUTES:  
CONNECT IS E1 RC AT 14  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L33 53 SEA FILE=REGISTRY SUB=L27 SSS FUL L31 53 cpds  
L42 2 SEA FILE=CAOLD ABB=ON PLU=ON L33 2 citations

=&gt; d all hitstr 1

L42 ANSWER 1 OF 2 CAOLD COPYRIGHT 2003 ACS

AN CA64:9750a CAOLD

TI isocyanurate compds. and preparative processes

AU Burdick, Donald L.; Osborn, M. D.

DT Patent

TI isocyanurates

PA Gulf Oil Corp.

DT Patent

PATENT NO.	KIND	DATE
US 3230220		1966
447-83-6	1843-48-7	1965-27-1
1843-48-7	1968-52-1	

PI US 3230220

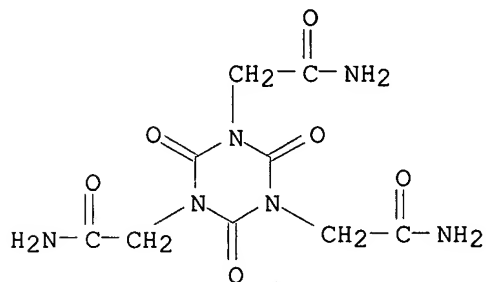
1966

IT 447-83-6 1843-48-7 1965-27-1 1968-52-1

IT 1843-48-7 1968-52-1

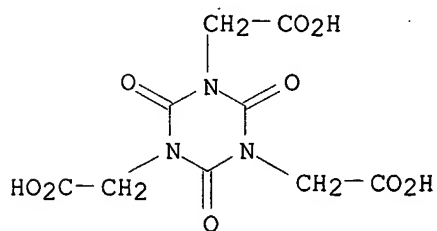
RN 1843-48-7 CAOLD

CN s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo- (7CI, 8CI) (CA INDEX NAME)



RN 1968-52-1 CAOLD

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



nitrile 53, paraformaldehyde 35,  $\text{Ac}_2\text{O}$  15, and II 0.1 g. is dropped 1 cc. concd.  $\text{H}_2\text{SO}_4$  in order to keep the temp. at 65–70°, the whole heated at 80° for 2 hrs., 500 cc.  $\text{H}_2\text{O}$  added, heated at 80°, filtered hot, and the filtrate cooled to give 75.1 g. I. Cf. following abstr.

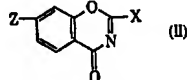
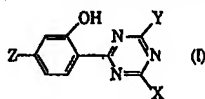
**Triazines.** Nitto Chemical Industry Co., Ltd. and Nitto Physico-Chemical Research Institute (by Hiroshi Hata, Motohiko Nishiide, and Kaoru Isono). Japan. 27,181(65), Nov. 29, Appl. Nov. 2, 1963; 2 pp. Manuf. of the same compd. as in the preceding abstr. from acrylonitrile and HCHO in the presence of KI is described. Cf. preceding abstr.

Hiroshi Kataoka

**Evaporation of urea for melamine production.** Badische Anilin- & Soda-Fabrik A.-G. (by Guenther Hamprecht, Ludwig Vogel, Matthias Schwarzmann, and Rudolf Mohr). Ger. 1,208,306 (Cl. C 07d), Jan. 5, 1968, Appl. March 28, 1964; 2 pp. In the process of heating urea in a 1st stage to 350–550° and contacting the resulting fission products at 330–450° in a 2nd stage with a catalyst to obtain melamine, urea was evapd. without leaving any residue by heat exchange with the fission products of the 1st stage or with the gas leaving the 2nd stage (free of melamine) heated to 350–550°. Thus, a cylindrical reactor (diam. 0.9 m., height 5 m.) was fed with 2400 m.<sup>3</sup>  $\text{NH}_3$  and cyanic acid as obtained from the cleavage of urea, rate of flow 3 m./sec., temp. 475°. At the same time finely dispersed urea (250 kg./hr.) was blown in continuously. One part of the gaseous mixt. leaving the base of the reactor with a temp. of 370° was reheated to 475° and returned to the reactor; the other part converted to melamine in a 2nd reaction stage.

Marianne Pauling

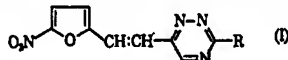
**o-Hydroxyphenyl-s-triazines.** J. R. Geigy A.-G. Neth. Appl. 302,937 (Cl. C 07d), Nov. 5, 1965; Swiss Appl. Jan. 24, 1963; 27 pp. The title compds. (I) are prepd. by the reaction of amidines with benzoxazinones of general formula II. The latter are made as described by Mustafa and Hassan (CA 51, 17,923f). Thus, 6 g. benzamidinium hydrochloride was added portionwise to a soln. of 2 g. dry NaOMe in 50 ml. abs. EtOH, the mixt. stirred 1 hr. at room temp., 6.6 g. 2-ethyl-4H,1,3-benzoxazin-4-one II (X = Et, Z = H) added, and the mixt. refluxed 4 hrs. After cooling,  $\text{H}_2\text{O}$  was added dropwise until the pptd. NaCl had dissolved to give I (X = Et, Y = Ph, Z = H), m. 87° (MeOH). In the same way were prepd. the following I (X,



Y, Z, and m.p. given): Ph,  $\text{PhCH}_3$ , H, 147° (MeOH); Ph, cyclohexyl, H, 147° (EtOH); Ph, decyl, H, 62° (EtOH);  $p\text{-MeOC}_6\text{H}_4$ , heptyl, H, 50° (MeOH);  $p\text{-MeOC}_6\text{H}_4$ , decyl, OMe, 70° (EtOH);  $p\text{-MeOC}_6\text{H}_4$ , Me, OMe, 130° (EtOH);  $p\text{-ClC}_6\text{H}_4$ , Me, OMe, 200° (Methyl Cellosolve). I absorb uv light and are used as components of light filters, mixed with many types of colorless polymers to prevent yellowing, and in films to protect light-sensitive materials. Examples with detailed exptl. and tech. procedures are given for various applications.

S. Vromen

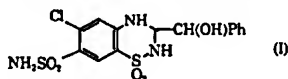
**3-Alkylamino-6-(5-nitrofur-2-ylvinyl)-1,2,4-triazines.** Koji Miura (by Masao Ikeda, Tomitsugu Ohashi, Yoshiko Igarashi, and Keiko Ichimura). Japan. 27,061(65), Nov. 26, Appl. Nov. 2, 1961; 5 pp. Manuf. of I, useful as chemotherapeutics



inhibiting the growth of staphylococci, *Bacillus subtilis*, *Escherichia coli*, *Shigella dysenteriae*, and *Salmonella typhosa*, is described. Thus, 1,5-bis(5-nitrofuryl)-1,4-pentadiene-3-one-N-methylguanyldiazene-HCl (10 g.) in 100 cc. ethylene glycol monomethyl ether is boiled with  $\text{NaHCO}_3$  for 1 hr., the mixt. cooled, filtered, the filtrate made slightly acidic, and concd. *in vacuo*. The residue is washed with warm HCl and made alk. to give I (R = NHMe), pale-orange needles, m. 230° (decompn.) (EtOH); hydrochloride m. 187–8° (decompn.); sulfate m. >300°. Similarly prepd. are the following I [R and m.p. (decompn.) of the hydrochloride given]: NHEt, 180°; NMe<sub>2</sub>, 210–12°.

Hiroshi Kataoka

**6-Chloro-3-(α-hydroxybenzyl)-7-sulfamoyl-3,4-dihydro-1,2,4-benzothiadiazine 1,1-dioxide.** Tanabe Seiyaku Co., Ltd. Brit. 1,016,970 (Cl. C 07d), Jan. 12, 1966; Japan. Appl. April 11, 1964; 4 pp. The title compd. (I) was prepd. by the reaction



of 5-chloro-2,4-disulfamoylaniline with phenylglyoxal, and the product hydrogenated. Thus, 3 g. 5-chloro-2,4-disulfamoylaniline and 1.6 g. phenylglyoxal in 60 ml. 20% EtOH, and 1.5

ml. 10% HCl were heated 7 hrs. on a water bath. After cooling, 3-benzoyl-6-chloro-7-sulfamoyl-3,4-dihydro-1,2,4-benzothiadiazine 1,1-dioxide (II) was obtained, m. 259–60° (aq.  $\text{Me}_2\text{CO}$ ). II (1 g.) in 20 ml.  $\text{H}_2\text{O}$  was dissolved in 10% aq. NaOH, and stirred with 0.25 g. NaBH<sub>4</sub> 2 hrs. with cooling. After standing overnight at room temp., the reaction mixt. was neutralized with 10% HCl, to give 0.8 g. I, m. 225–7° (decompn.) (aq. EtOH). I has natriuretic activity.

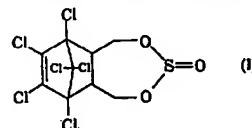
P. J. S. Mitchell

**Isocyanurate compounds and preparative processes.** Donald L. Burdick and Myron D. Osborn (to Gulf Oil Corp.). U.S. 3,230,220 (Cl. 260-248), Jan. 18, 1966, Appl. April 24, 1961; 3 pp. The title compds. are prepd. by treating trisodium cyanurate (I) with a halo-substituted acetonitrile or acetamide to form tris(cyanomethyl)isocyanurate (II) and tris(carbamoylmethyl)isocyanurate (III). These derivs. are hydrolyzed to tris(carboxymethyl)isocyanurate (IV), useful in the prepn. of polymers. Thus, 195 g. I in 200 ml. HCONMe<sub>2</sub> was heated to 95° and treated, over 2 hrs., with 280.5 g.  $\text{ClCH}_2\text{CONH}_2$  in 500 ml. HCONMe<sub>2</sub>. The mixt. was held 18 hrs. at 90°, cooled to give a ppt., and filtered off. The solid was washed with  $\text{H}_2\text{O}$  and  $\text{Me}_2\text{CO}$  to give 240.2 g. cryst. III, m. 350–1°. III (5 g.) was refluxed 3 hrs. in 125 ml. concd. HCl to yield white cryst. IV, m. 264–6°.  $\text{ClCH}_2\text{CN}$  (19.5 g.) was added over 2 hrs. to 19.5 g. I in 100 ml. HCONMe<sub>2</sub> at 50°. The mixt. was held 2.5 hrs. at 50°, cooled, and filtered. The filtrate was evapd. to dryness *in vacuo* and the residue triturated with 250 ml. of boiling  $\text{H}_2\text{O}$  to give II, m. 232–4°. II (2.6 g.) was refluxed 5 min. in 10 ml. concd. HCl to give 2.85 g. III. IV (91 g.), 53 g. propylene glycol, and 14.5 g. adipic acid was heated 3.5 hrs. at 140–50° to give a polyester having an acid number of about 85. The polymer was dissolved in 150 ml.  $\text{H}_2\text{O}$  contg. 8 ml. concd.  $\text{NH}_4\text{OH}$  to give a transparent soln. contg. 50% by wt. of solids and showing a viscosity of X-Y (Gardner Scale).

J. R. Corrigan

#### SEVEN- AND HIGHER-MEMBERED RINGS

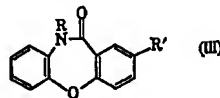
**Separation of isomeric mixtures of 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,3,4-benzodioxathiepine 3-oxide (endosulfane).** Hooker Chemical Corp. (by Hans L. Schlichting). Ger. 1,207,400 (Cl. C 07d), Dec. 23, 1965; U.S. Appl. Nov. 30, 1962; 4 pp. Isomeric mixts. of the title compd. (I) were sep'd. by using different solvents. Thus, 300 g. I



were stirred at 45° with 100 ml.  $\text{ClCH}_2\text{CCl}_3$  (II). After cooling and filtration, the residue (110 g., m.p. 150–60°) was recrystd. from  $\text{CCl}_4$  to give 70 g. of the higher melting isomer, m.p. 210°. The former filtrate was evapd. and the residue dissolved in 600 ml. MeOH. Filtration at 20° gave 140 g. I, m.p. 107–8° (99% purity). Evapn. of the filtrate gave 50 g. residue as 70:30 mixt. of both isomers. Similar purifications using  $\text{Cl}_2\text{C}:\text{CCl}_2$  (III)–II–PrOH, III–II–MeOH,  $\text{CH}_2\text{Cl}_2\text{--CCl}_4\text{--MeOH}$  and II–III–sec-BuOH were described.

K. Thewalt

**10-Substituted dibenz[b,f][1,4]oxazepine derivatives.** Dr. A. Wander A.-G. Neth. Appl. 302,836 (Cl. C 07d), Oct. 25, 1965; Ger. Appl. Jan. 3, 1963; 9 pp. 2-Chloro-10,11-dihydro-11-oxodibenz[b,f][1,4]oxazepine (I) (12.3 g.) and 2.50 g. powd. NaNH, in 80 cc. dry dioxane refluxed 2 hrs., treated with 6.7 g.  $\text{Me}_2\text{N}(\text{CH}_2)_3\text{Cl}$  (II) in 12 cc. MePh, and refluxed 16 hrs. yielded 14.2 g. III [R =  $\text{Me}_2\text{N}(\text{CH}_2)_3$ , R' = Cl] (IV), b<sub>0.07</sub> 163–70°; IV.HCl m. 161–4°. I (6.2 g.), 7% excess powd. NaNH, and 60 cc. dry dioxane refluxed 1 hr., some 10 cc. dioxane distd. the residue heated 5 hrs. at 80° in an autoclave with 1.5 mole equivs. ethylene oxide and evapd., the residue refluxed 15 hrs. with 20 cc.  $\text{SOCl}_2$  in 35 cc.  $\text{CHCl}_3$ , and the resulting resinous material heated 4 hrs. at 80° in a small vol. dioxane with 16 g.  $\text{Me}_2\text{NH}$  (as 33% alc. soln.), filtered, and basified with



$\text{NH}_4\text{OH}$  yielded 62% III [R =  $\text{Me}_2\text{NCH}_2\text{CH}_2$ , R' = Cl], b<sub>0.07</sub> 160–8°; oxalate m. 185–6° (MeOH–Et<sub>2</sub>O). 4,2-Cl( $\text{MeO}_2\text{C}$ )– $\text{C}_6\text{H}_4\text{OCH}_2\text{CH}_2\text{NH}_2$  (8.0 g.) in 50 cc. dry dioxane, 1.29 g. powd. NaNH, and 4.1 g. II yielded 75% IV. Similarly were prepd. III (R =  $\text{Me}_2\text{NCH}_2\text{CH}_2$ , R' = Me), b<sub>0.07</sub> 160–5°; HCl salt m. 157–60° ( $\text{Me}_2\text{CO}$ –AcOEt); oxalate m. 165–7° ( $\text{Me}_2\text{CO}$ –MeOH–Et<sub>2</sub>O), and III [R =  $\text{Me}_2\text{N}(\text{CH}_2)_3$ , R' = Me], b<sub>0.07</sub> 160–5°; oxalate m. 153–5° and 170–2° (MeOH–Et<sub>2</sub>O). The III exhibit valuable thymoleptic and antidepressant activity.

F. W. Hoffmann

See also: Physical Organic Chemistry, Section 32. Hetero-

=&gt; d all hitstr 2

L42 ANSWER 2 OF 2 CAOLD COPYRIGHT 2003 ACS

AN CA63:619h CAOLD

TI isocyanurates

PA Spencer Chemical Co.

DT Patent

PATENT NO. KIND DATE

PI GB 988631

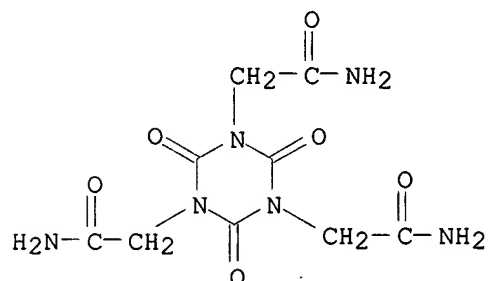
DE 1195761

IT 1843-48-7 1965-27-1 1968-52-1

IT 1843-48-7 1968-52-1

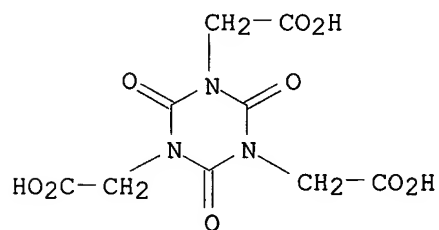
RN 1843-48-7 CAOLD

CN s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo- (7CI, 8CI) (CA INDEX NAME)



RN 1968-52-1 CAOLD

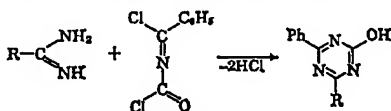
CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



450 cc. 2*N* H<sub>2</sub>SO<sub>4</sub>. The reaction mixt. is heated 1 hr. at 50°, filtered, the residue suspended in H<sub>2</sub>O (1200 cc.), dissolved with concd. NH<sub>3</sub>, the soln. filtered and AcOH added to pH 5 to give I.  
Giorgio A. Pagani

### TRIAZINES AND OTHER 6-MEMBERED RINGS

A new synthesis of 2-hydroxy-*s*-triazines. Farbenfabriken Bayer A.-G. (by Eberhart Degener, Hans Holtschmidt, and Hans G. Schmelzer). Fr. 1,379,156 (Cl. A 01n, C 07d), Nov. 20, 1964; Ger. Appl. Dec. 14, 1962; 21 pp. Benzamidine hydrochloride [10 parts (pts.)] dissolved in 20 pts. water is neutralized with a soln. of NaOH (7.7 pts.) in 10 pts. water. To the soln. maintained at 20–30° is added dropwise 13 pts. of phenylchloromethylene carbamic acid chloride. After 15 min., 12.8 pts. of 2-hydroxy-4,6-diphenyl-*s*-triazine is collected by suction, m. 295°. The following *s*-triazine derivs. are obtained by the same new general scheme (R, m.p., % yield given): SME, 278°, b

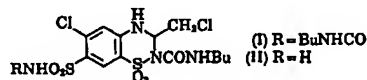


—, 2-ClC<sub>6</sub>H<sub>4</sub>, 228–9°, —; CCl<sub>4</sub>, 254–5°, 61; Et, 230°, 60; 3-cyclohexenyl, 284°, 80; 4-ClC<sub>6</sub>H<sub>4</sub>, 287–8°, 99; benzyl, 223–4°, 99; Me, 238°, 73; 4-MeC<sub>6</sub>H<sub>4</sub>, 284°, 99; 2-MeOC<sub>6</sub>H<sub>4</sub>, 288°, —; PhCH<sub>2</sub>NNH, 262°, ~100; 4-ClC<sub>6</sub>H<sub>4</sub>NH, 352–4°, 94.

G. A. Coppens

Preparation of 2-styryl-4,6-dihydroxy-1,3,5-triazine. Scientific Research Institute of Organic Intermediates and Dyes (by V. I. Mur). U.S.S.R. 168,708 (Cl. C 07d), Feb. 26, 1965, Appl. July 30, 1963. The title compd. is prepd. by heating styrylbiuret with an aq. soln. of NaOH and isolating the desired product by acidification at room temp. From *Byul. Izobret. i Tovarnyykh Znakov* 1965(5), 25(Russ).

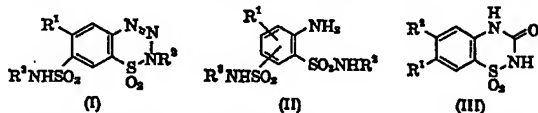
MHCL  
2-(*N*-Butylcarbamoyl)-3-chloromethyl-6-chloro-7-[*N*-(*N*-butylcarbamoyl)sulfamoyl]-3,4-dihydro-1,2,4-benzothiadiazine 1,1-dioxide. CIBA Ltd. (by George De Stevens and Lincoln H. Werner). Fr. M2850 (Cl. A 61k, C 07d), Nov. 16, 1964; U.S. Appl. Sept. 15, 1961; 12 pp.; cf. Belg. 622,464 (CA 59, 10090a). The title compd. (I), m. 137–40°, was prepd. from 4.3 g. 3-



chloromethyl-6-chloro-7-sulfamoyl-3,4-dihydro-1,2,4-benzothiadiazine 1,1-dioxide and is useful as a diuretic and natriuretic. The crude product was purified by careful addn. of HCl to an aq. NH<sub>4</sub>OH soln.; the major contaminant II pptd. first.

D. E. Nettleton, Jr.

New derivatives of benzothiadiazine. May & Baker Ltd. Fr. 1,363,116 (Cl. C 07d), June 12, 1964, Appl. Dec. 9, 1960; 6 pp. I, useful as diuretics, are prepd. by diazotizing and cyclizing II. To 10 g. III (R<sup>1</sup> = SO<sub>2</sub>NH<sub>2</sub>, R<sup>2</sup> = Cl) in 40 cc. HCONMe<sub>2</sub> is added 0.75 g. NaH, the suspension heated to 70°, 5.5



g. PhCH<sub>2</sub>Br added, the mixt. stirred, poured on ice, the ppt. filtered off, and crystd. (EtOH) to give the 2-PhCH<sub>2</sub> deriv., m. 250–2°, 112 g. of which is dissolved in 1120 cc. 20% NaOH, refluxed 16 hrs., cooled, and HCl added, and the product recrystd. (MeOH) to give II (R<sup>1</sup> = 5-Cl, R<sup>2</sup> = CH<sub>2</sub>Ph, R<sup>3</sup> = H (4-position)), m. 155–60°. This product (3.75 g.) is suspended in a mixt. of 10 cc. AcOH and 12.5 cc. 2*N* H<sub>2</sub>SO<sub>4</sub>, diazotized, given with 100 cc. H<sub>2</sub>O, and the product recrystd. (MeOH) to give I (R<sup>1</sup> = CH<sub>2</sub>Ph, R<sup>2</sup> = Cl, R<sup>3</sup> = H), m. 161–2° (decompn.). Similarly are prepd. I (R<sup>1</sup> = Cl, R<sup>2</sup> = R<sup>3</sup> = Me), m. 154–5°, I (R<sup>1</sup> = F<sub>3</sub>C, R<sup>2</sup> = R<sup>3</sup> = Me), m. 148–9°, and I (R<sup>1</sup> = Cl, R<sup>2</sup> = Me, R<sup>3</sup> = H), m. 166–70°.

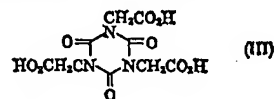
R. K. Srivastava

Pesticides from hexachlorotriethane tetroxide and trimethyl-trithiane dioxide. Frank B. Slezak and Russell M. Bimber (to Diamond Alkali Co.). U.S. 3,171,778 (Cl. 167–33), March 2, 1965, Appl. Dec. 7, 1961; 4 pp. Continuation-in-part of U.S. 3,086,149 (CA 58, 11384h). 2,4,6-Trimethyl-1,3,5-trithiane 1,3-dioxide (I) are useful against fungi, nematodes, and insects, but have no herbicidal effects. I is prepd. by treating 100.5 g. 2,4,6-trimethyl-1,3,5-trithiane with 223 ml. 25% H<sub>2</sub>O<sub>2</sub> in 1500 ml. AcOH below 35°. The solvent is distd. *in vacuo* and I is crystd. from hot benzene as a white solid, m. 181.0–2.5°. Also is prepd. 2,2,4,4,6,6-hexachloro-1,3,5-trithiane 1,1,3,3-tetroxide, m. 202–3°.

B. R. Briggs, Jr.

Isocyanurates. Spencer Chemical Co. Brit. 988,631 (Cl. C 07cd), April 7, 1965; U.S. Appl. April 24, 1961; 4 pp. The title compds. were prepd. by heating an alkali metal or a quater-

nary ammonium salt of cyanuric acid with halogenated AcNH<sub>2</sub> or MeCN at 50–150° in an inert medium, and subsequent acid hydrolysis. Thus, to a slurry of 195 g. trisodium cyanurate (I) in 200 ml. HCONMe<sub>2</sub> heated to 95°, a soln. of 280.5 g. ClCH<sub>2</sub>CONH<sub>2</sub> in 500 ml. HCONMe<sub>2</sub> was added dropwise with stirring, the soln. kept 18 hrs. at 90°, and cooled to yield 240.2 g. cryst. tris(aminocarbonylmethyl) isocyanurate (II), m. 350–1°. A

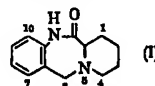


mixt. of 5 g. I in 125 ml. concd. HCl was refluxed 3 hrs., and cooled to yield tris(carboxymethyl) isocyanurate (III), m. 264–6°. Similarly, reaction of ClCH<sub>2</sub>CN with I gave tris(cyanomethyl) isocyanurate (IV), m. 232–4° (MeCN). IV (2.6 g.) in 10 ml. concd. HCl refluxed 5 min. gave II. A mixt. of 91 g. III, 53 g. propylene glycol, and 14.5 g. adipic acid was heated with stirring 3.5 hrs. at 140–50°. The polyester formed (acid no. ~85) was dissolved in 150 ml. H<sub>2</sub>O contg. 8 ml. concd. NH<sub>4</sub>OH to provide a transparent soln. contg. 50% by wt. of solids. This soln. had a viscosity of X–Y (Gardner Scale). III is useful in the prepn. of its polymers (polyesters and polyamides) which in turn are useful in forming coatings, and molded plastic articles.

Sister Miriam Grace Solomon

### SEVEN- AND HIGHER-MEMBERED RINGS

Tranquilizing agents. J. R. Geigy A.-G. (by Karl J. Doebel and Heinz Pfenniger). Fr. 1,389,526 (Cl. A 61k, C 07d), Feb. 19, 1965; U.S. Appl. Dec. 26, 1962; 19 pp. Derivs. of 1,2,3,4,6,12a-hexahydropyrido[2,1-c]-1,4-benzodiazepin-12(11*H*)-one (I) have anticonvulsant, muscle relaxant, and blood pressure and



d central nervous system depressant properties. They are prepd. by treating appropriately substituted *o*-aminobenzylpipercolinic acid with a mineral acid. These compds. are prepd. by the reaction of an *o*-nitrobenzyl halide with an ester of pipercolinic acid, followed by controlled reduct. of NO<sub>2</sub> to NH<sub>2</sub> with Raney Ni, avoiding hydrogenolysis of the benzyl linkage. Ethyl *N*-(*o*-nitrobenzyl)pipercolinate, b<sub>0.4</sub> 150–2°, n<sub>D</sub><sup>20</sup> 1.5266, was prepd. in 43-g. yield by the reaction of 31.4 g. ethyl pipercolinate in 200 ml. toluene with 34.3 g. *o*-nitrobenzyl chloride in the presence of 32 g. K<sub>2</sub>CO<sub>3</sub> during 12 hrs. reflux. The toluene soln. was extd. with 3*N* HCl, the acid soln. was extd. with EtOAc, and then treated with alkali to pH 10. The ppt. was dissolved in CHCl<sub>3</sub>, dried, and distd. A soln. of 33 g. in 500 ml. alc. with Raney Ni catalyst absorbed 2350 ml. H to give 24.7 g. of the amino ester, b<sub>0.4</sub> 146–7°, n<sub>D</sub><sup>20</sup> 1.5392. A soln. of 24 g. amino ester in 300 ml. 3*N* HCl was refluxed 5 hrs., cooled, and adjusted to pH 10, giving a 70% yield of I, m. 182–3° (alc.); HCl salt m. above 250° (alc.). Similarly prepd. were the following derivs. of I: 8-Cl, m. 224–5° (alc.), methiodide m. 246–8° (butanone); *N*-oxide of 8-Cl deriv., prepd. by oxidn. of 1 g. in 10 ml. alc. with 1.8 ml. 30% H<sub>2</sub>O<sub>2</sub>, m. 162–3° (decompn.) (alc.); 9-cyano, m. 134° (vacuum sublimation); 9-methoxy, m. 205–7° (BuOH); 9-methyl, 40%, m. 231–2° (alc.); 8,9-dimethoxy, 21.6%, m. 203–4° (alc.); 9-F<sub>3</sub>C, m. 185–6°; 9-chloro, m. 182–3°; 8,9-dimethyl, m. 229–30°; 8,9-dichloro, m. 199–200°; methiodide of I, 85%, m. 224–5° (decompn.) (butanone). The various substituted ethyl *N*-benzylpipercolinates prepd. were: 2-nitro-5-chloro, 66%, b<sub>0.4</sub> 153–4°; 2-amino-5-chloro, b<sub>0.4</sub> 154°; 2-nitro-4-cyano, b<sub>0.4</sub> 160°; 2-amino-4-cyano, m. 100–6°; 2-nitro-4-methoxy, b<sub>0.4</sub> 165–7°; 2-amino-4-methoxy, b<sub>0.4</sub> 163–5°.

J. C. Braun

Benzodiazepines. John Krapcho (to Olin Mathieson Chemical Corp.). U.S. 3,173,912 (Cl. 260–239.3), March 16, 1965, Appl. Oct. 2, 1961; 5 pp. The title compds. (I) or their acid addn. salts are prepd. by condensing an intermediate (II) with an amino alkyl halide of formula R'NAY where A is ethylene or



trimethylene and NR' is bis(lower alkyl) amino. *o*-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>-COCl (III) is condensed with a glycine RNHCH<sub>2</sub>CO<sub>2</sub>Z (IV) to yield a reaction product *o*-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CONRCH<sub>2</sub>CO<sub>2</sub>Z (V); V is converted to the corresponding *o*-amino deriv. (VI) by reduct. with H by using a Pd–C catalyst; V or VI is treated with HCl to convert the salt or ester to its acid deriv. which is cyclized to II. Thus, *o*-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H is treated with SOCl<sub>2</sub> to give III. III in 100 ml. CHCl<sub>3</sub> is added dropwise in 30 min. to a stirred soln. of 114 g. IV (R = Ph, Z = K) in 150 ml. H<sub>2</sub>O at 5–10°, NaOH (25 g.) in 200 ml. H<sub>2</sub>O is added to neutralize reaction-liberated acid.



# Inventu Search

EPPERSON 10/071,707

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L1 107 SEA FILE=HCAPLUS ABB=ON PLU=ON OSTRESH J?/AU  
L2 5423 SEA FILE=HCAPLUS ABB=ON PLU=ON YU Y?/AU  
L3 1022 SEA FILE=HCAPLUS ABB=ON PLU=ON HOUGHTEN R?/AU  
L4 6440 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3)  
L5 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND ?TRIAZIN?  
L6 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND "1,3,5-TRIAZINE"  
L7 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND "1,3,5-TRIAZINO"  
L8 9 SEA FILE=HCAPLUS ABB=ON PLU=ON (L6 OR L7)  
L9 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND "2,4,6-TRIONES"  
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L12 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:532106 HCAPLUS

DOCUMENT NUMBER: 137:232618

TITLE: Efficient Solid-Phase Synthesis of  
1,3,5-Trisubstituted 1,3,5  
-Triazine-2,4,6  
-trionesAUTHOR(S): Yu, Yongping; Ostresh, John M.;  
Houghten, Richard A.CORPORATE SOURCE: Torrey Pines Institute for Molecular Studies, San  
Diego, CA, 92121, USASOURCE: Journal of Combinatorial Chemistry (2002), 4(5),  
484-490

CODEN: JCCHFF; ISSN: 1520-4766

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:232618

AB The solid-phase synthesis of 1,3-disubstituted and 1,3,5-trisubstituted  
1,3,5-triazine-2,4

,6-triones from MBHA and Wang resin is described.

Reaction of resin-bound amino acids with isocyanates yield resin-bound  
ureas, which further react with chlorocarbonyl isocyanate in toluene at 65  
.degree.C to selectively afford the resin-bound 1,3-disubstituted

1,3,5-triazine-2,4

,6-triones. Selective alkylation at the N-5 position

of the resin-bound 1,3-disubstituted 1,3,5-

triazine-2,4,6-triones was

accomplished by treatment with alkyl halides in the presence of

1,8-diazabicyclo[5.4.0]undec-7-ene (DBU). The desired products were

cleaved from their solid support and obtained in good yield and purity.

The method can be employed in prodn. of toltrazuril analog libraries for  
identification of new anticoccidial agents.

IT 13734-34-4P 457884-80-9P 457884-81-0P

457884-82-1P 457884-83-2P 457884-84-3P

457884-85-4P 457884-86-5P 457884-87-6P

457884-88-7P 457884-89-8P 457884-90-1P

457884-91-2P 457884-92-3P 457884-93-4P

457884-94-5P 457884-95-6P 457884-96-7P

457884-97-8P 457884-98-9P 457884-99-0P

457885-00-6P 457885-01-7P

RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP  
(Preparation)

(solid-phase synthesis of substituted 1,3,5

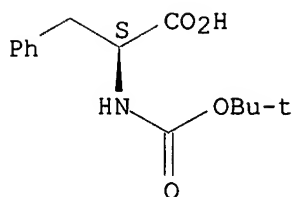
-triazine-2,4,6-triones

)

RN 13734-34-4 HCAPLUS

CN L-Phenylalanine, N-[(1,1-dimethylethoxy)carbonyl]- (9CI) (CA INDEX NAME)

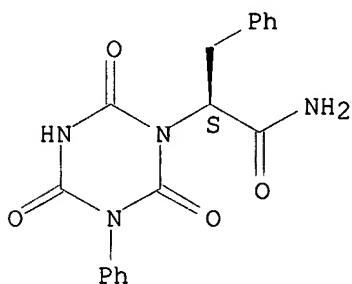
Absolute stereochemistry. Rotation (+).



RN 457884-80-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-2,4,6-trioxo-3-phenyl-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

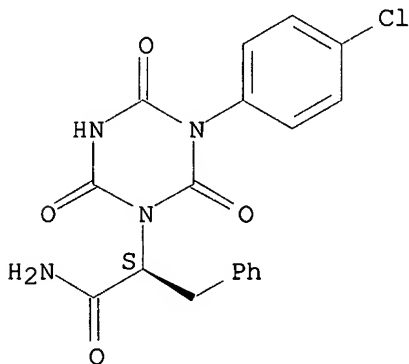
Absolute stereochemistry.



RN 457884-81-0 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-(4-chlorophenyl)tetrahydro-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

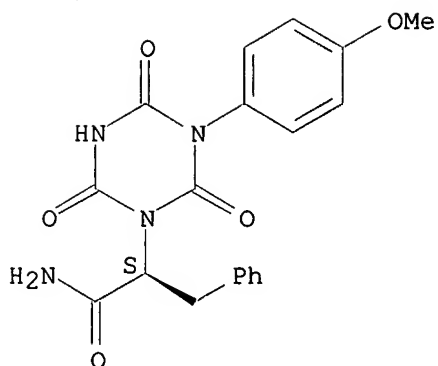
Absolute stereochemistry.



RN 457884-82-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-3-(4-methoxyphenyl)-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

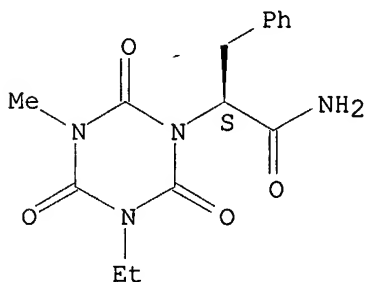
Absolute stereochemistry.



RN 457884-83-2 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-ethyltetrahydro-5-methyl-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

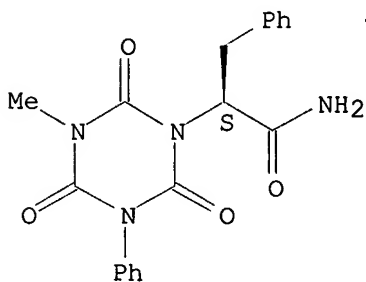
Absolute stereochemistry.



RN 457884-84-3 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-3-methyl-2,4,6-trioxo-5-phenyl-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

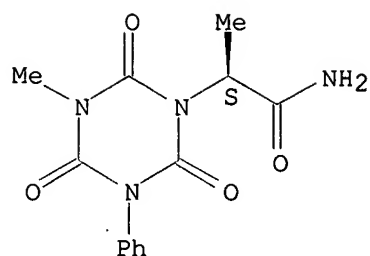
Absolute stereochemistry.



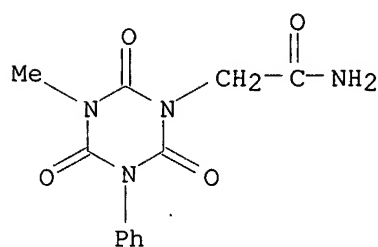
RN 457884-85-4 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-.alpha.,3-dimethyl-2,4,6-trioxo-5-phenyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

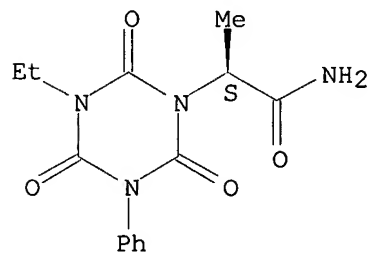


RN 457884-86-5 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-3-methyl-2,4,6-trioxo-5-phenyl-  
 (9CI) (CA INDEX NAME)



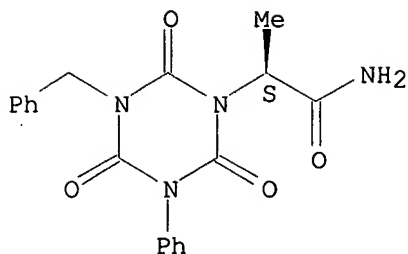
RN 457884-87-6 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetamide, 3-ethyltetrahydro-.alpha.-methyl-2,4,6-  
 trioxo-5-phenyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 457884-88-7 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-.alpha.-methyl-2,4,6-trioxo-3-  
 phenyl-5-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

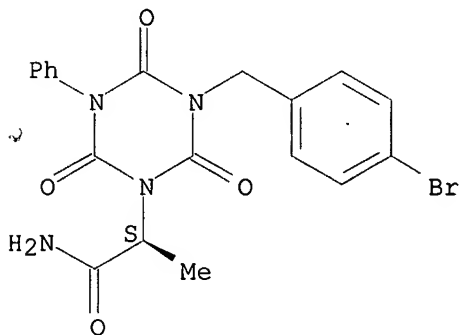
Absolute stereochemistry.



RN 457884-89-8 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[(4-bromophenyl)methyl]tetrahydro-.alpha.-methyl-2,4,6-trioxo-5-phenyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

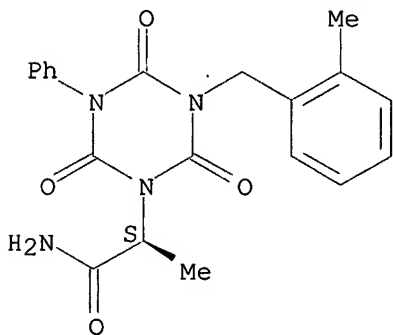
Absolute stereochemistry.



RN 457884-90-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, tetrahydro-.alpha.-methyl-3-[(2-methylphenyl)methyl]-2,4,6-trioxo-5-phenyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

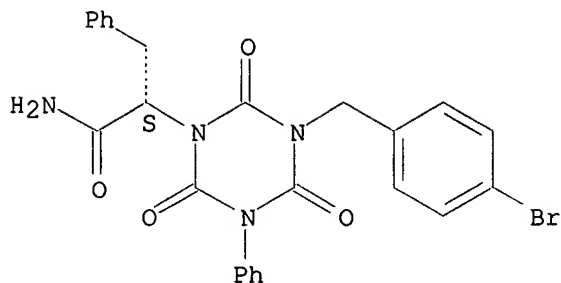
Absolute stereochemistry.



RN 457884-91-2 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[(4-bromophenyl)methyl]tetrahydro-2,4,6-trioxo-5-phenyl-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

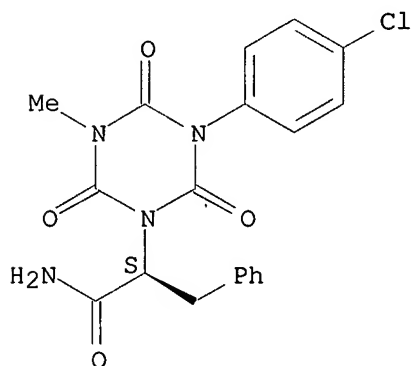
Absolute stereochemistry.



RN 457884-92-3 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-(4-chlorophenyl)tetrahydro-5-methyl-  
2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

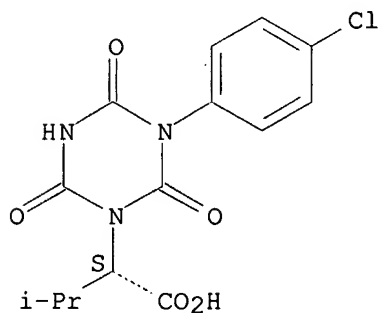
Absolute stereochemistry.



RN 457884-93-4 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-(4-chlorophenyl)tetrahydro-.alpha.-(1-  
methylethyl)-2,4,6-trioxo-, (.alpha.S)- (9CI) (CA INDEX NAME)

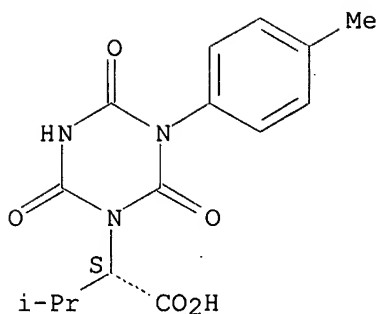
Absolute stereochemistry.



RN 457884-94-5 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-.alpha.-(1-methylethyl)-3-(4-  
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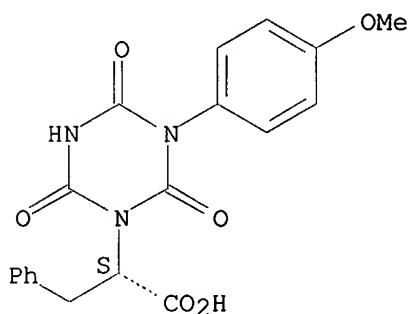
Absolute stereochemistry.



RN 457884-95-6 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-3-(4-methoxyphenyl)-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

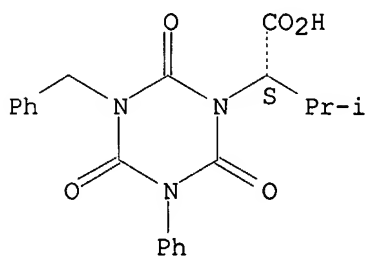
Absolute stereochemistry.



RN 457884-96-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-.alpha.-(1-methylethyl)-2,4,6-trioxo-3-phenyl-5-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

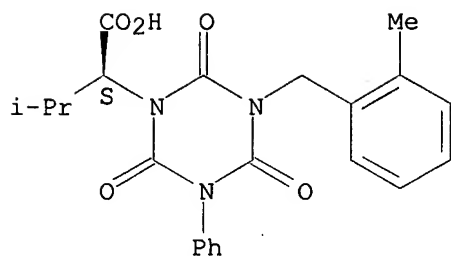


RN 457884-97-8 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-.alpha.-(1-methylethyl)-3-[(2-methylphenyl)methyl]-2,4,6-trioxo-5-phenyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

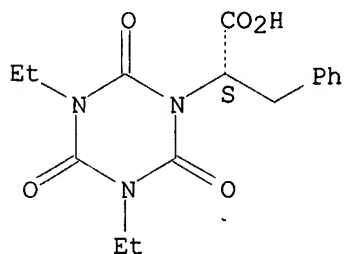




RN 457884-98-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3,5-diethyltetrahydro-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

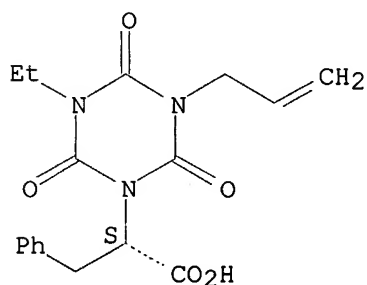
Absolute stereochemistry.



RN 457884-99-0 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-ethyltetrahydro-2,4,6-trioxo-.alpha.-(phenylmethyl)-5-(2-propenyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

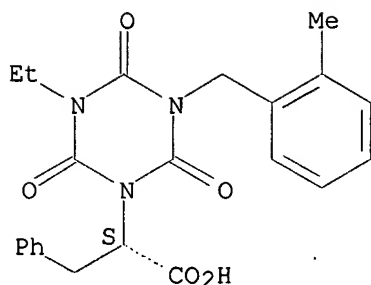
Absolute stereochemistry.



RN 457885-00-6 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-ethyltetrahydro-5-[(2-methylphenyl)methyl]-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

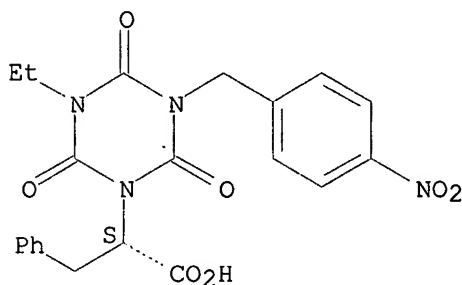
Absolute stereochemistry.



RN 457885-01-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-ethyltetrahydro-5-[(4-nitrophenyl)methyl]-2,4,6-trioxo-.alpha.-(phenylmethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 100-14-1, 4-Nitrobenzyl chloride 100-44-7, Benzyl chloride, reactions 103-71-9, reactions 104-12-1 107-05-1, Allyl chloride 109-90-0 552-45-4, 2-Methylbenzyl chloride 589-17-3, 4-Bromobenzyl chloride 622-58-2 4530-20-5 5416-93-3

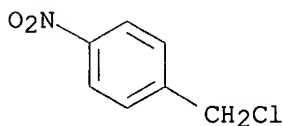
15761-38-3 35661-40-6 68858-20-8

RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)

(solid-phase synthesis of substituted 1,3,5-triazine-2,4,6-triones)

RN 100-14-1 HCAPLUS

CN Benzene, 1-(chloromethyl)-4-nitro- (9CI) (CA INDEX NAME)

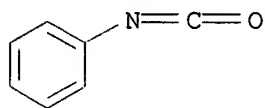


RN 100-44-7 HCAPLUS

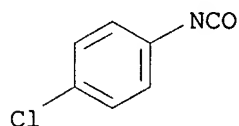
CN Benzene, (chloromethyl)- (9CI) (CA INDEX NAME)

Ph-CH<sub>2</sub>-Cl

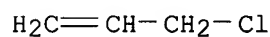
RN 103-71-9 HCAPLUS  
CN Benzene, isocyanato- (9CI) (CA INDEX NAME)



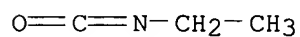
RN 104-12-1 HCAPLUS  
CN Benzene, 1-chloro-4-isocyanato- (9CI) (CA INDEX NAME)



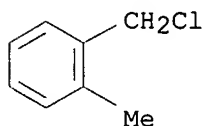
RN 107-05-1 HCAPLUS  
CN 1-Propene, 3-chloro- (9CI) (CA INDEX NAME)



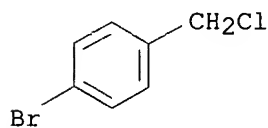
RN 109-90-0 HCAPLUS  
CN Ethane, isocyanato- (9CI) (CA INDEX NAME)



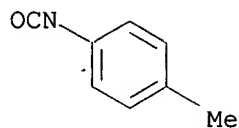
RN 552-45-4 HCAPLUS  
CN Benzene, 1-(chloromethyl)-2-methyl- (9CI) (CA INDEX NAME)



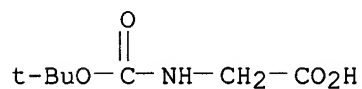
RN 589-17-3 HCAPLUS  
CN Benzene, 1-bromo-4-(chloromethyl)- (9CI) (CA INDEX NAME)



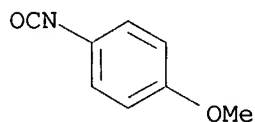
RN 622-58-2 HCAPLUS  
CN Benzene, 1-isocyanato-4-methyl- (9CI) (CA INDEX NAME)



RN 4530-20-5 HCAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]- (9CI) (CA INDEX NAME)

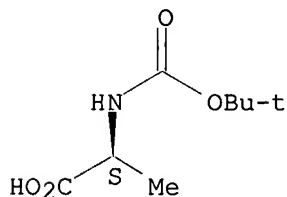


RN 5416-93-3 HCAPLUS  
 CN Benzene, 1-isocyanato-4-methoxy- (9CI) (CA INDEX NAME)



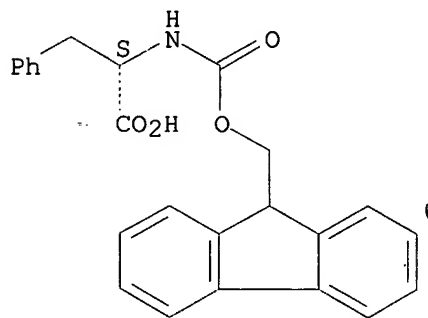
RN 15761-38-3 HCAPLUS  
 CN L-Alanine, N-[(1,1-dimethylethoxy)carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



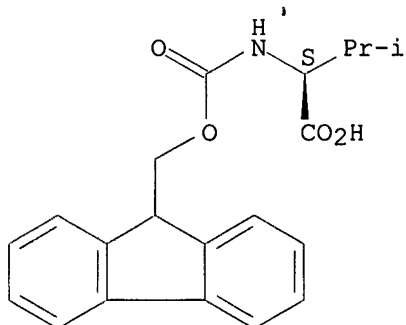
RN 35661-40-6 HCAPLUS  
 CN L-Phenylalanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 68858-20-8 HCAPLUS  
 CN L-Valine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))  
 ST solid phase synthesis **triazinetriene**  
 IT Combinatorial library  
 Solid phase synthesis  
 (solid-phase synthesis of substituted 1,3,5  
 -triazine-2,4,6-triones  
 )  
 IT 13734-34-4P 457884-80-9P 457884-81-0P  
 457884-82-1P 457884-83-2P 457884-84-3P  
 457884-85-4P 457884-86-5P 457884-87-6P  
 457884-88-7P 457884-89-8P 457884-90-1P  
 457884-91-2P 457884-92-3P 457884-93-4P  
 457884-94-5P 457884-95-6P 457884-96-7P  
 457884-97-8P 457884-98-9P 457884-99-0P  
 457885-00-6P 457885-01-7P  
 RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP  
 (Preparation)  
 (solid-phase synthesis of substituted 1,3,5  
 -triazine-2,4,6-triones  
 )  
 IT 100-14-1, 4-Nitrobenzyl chloride 100-44-7, Benzyl  
 chloride, reactions 103-71-9, reactions 104-12-1  
 107-05-1, Allyl chloride 109-90-0 552-45-4,  
 2-Methylbenzyl chloride 589-17-3, 4-Bromobenzyl chloride  
 622-58-2 4530-20-5 5416-93-3  
 15761-38-3 35661-40-6 68858-20-8  
 RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial  
 study); RACT (Reactant or reagent)  
 (solid-phase synthesis of substituted 1,3,5  
 -triazine-2,4,6-triones  
 )

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

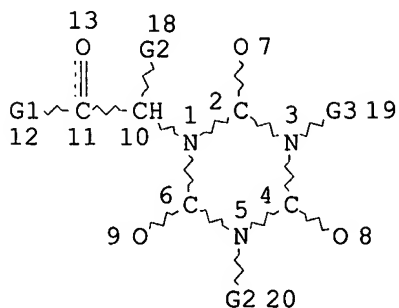
# Beilstein Search

EPPERSON 10/071,707

=> d que 144

L31

STR



O @14

Cb @17

Ak @15

VAR G1=NH2/14

VAR G2=H/15/17

VAR G3=17/15

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 14

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L44

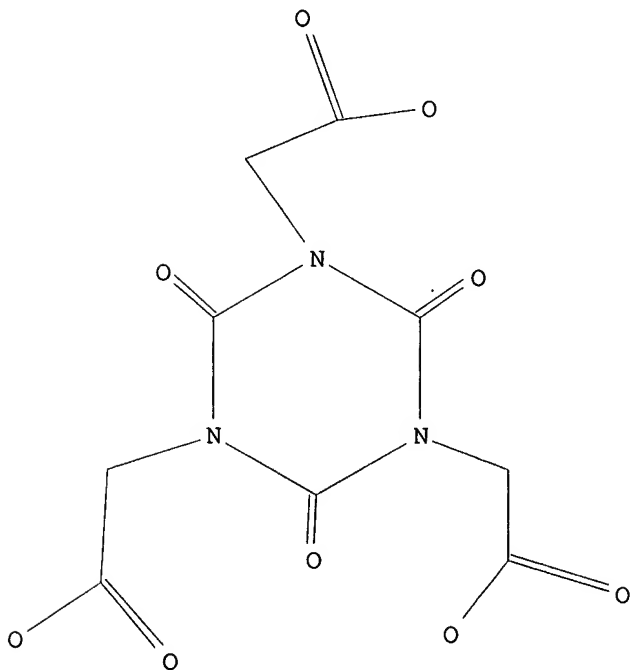
4 SEA FILE=BEILSTEIN SSS FUL L31

4 compounds

=&gt; d 144 1

## L44 ANSWER 1 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Beilstein Records (BRN): 900309  
 Beilstein Pref. RN (BPR): 1968-52-1  
 CAS Reg. No. (RN): 1968-52-1  
 Chemical Name (CN): 2,2',2''-(2,4,6-trioxo-<1,3,5>triazinane-1,3,5-triyl)-tris-acetic acid  
 Autonom Name (AUN): (3,5-bis-carboxymethyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetic acid  
 Molec. Formula (MF): C9 H9 N3 O9  
 Molecular Weight (MW): 303.18  
 Lawson Number (LN): 30154, 3379  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 916533  
 Tautomer ID (TAUTID): 941964  
 Beilstein Citation (BSO): 5-26  
 Entry Date (DED): 1988/11/28  
 Update Date (DUPD): 1991/10/16



## Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1

CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	2

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d rx

L44 ANSWER 1 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Reaction:

RX

Reaction ID (.ID): 6182663  
 Product BRN (.PBRN): 900309  
 Product (.PRO): 2,2',2''-(2,4,6-trioxo-<1,3,5>triazinane-1,3,5-triyl)-tris-acetic acid  
 No. of React. Details (.NVAR): 1

Reaction Details:

RX

Reaction RID (.RID): 6182663.1  
 Reaction Classification (.CL): Preparation (half reaction)  
 Reference(s):  
 1. Patent: Spencer Chem. Co. GB 988631 1961, Chem.Abstr., 63(620b), <1965>  
 2. Airapetyan et al., Arm.Khim.Zh., CODEN: AYKZAN, 32, <1979>, 901,903, Chem.Abstr., 92(215401s), <1980>  
 3. Patent: Gulf Oil Corp. US 3230220 1961, Chem.Abstr., 64(9750a), <1966>

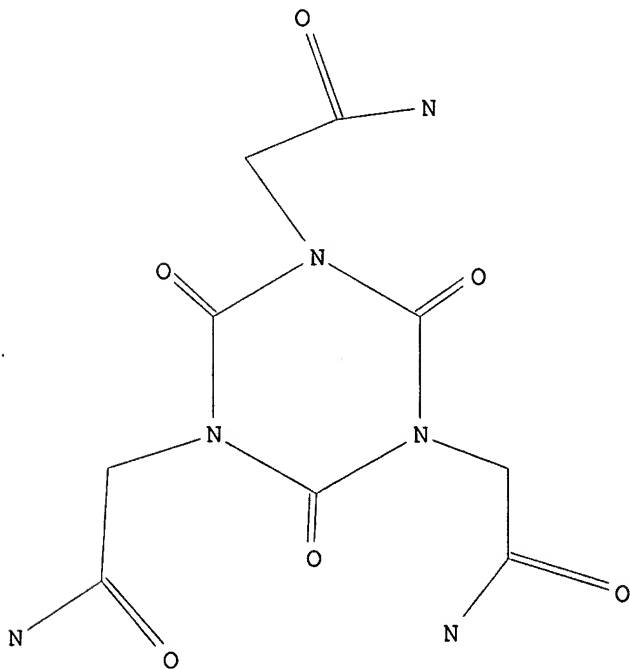


=&gt; d 144 12

4 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE  
 The answer numbers requested are not in the answer set.  
 ENTER ANSWER NUMBER OR RANGE (1):2

L44 ANSWER 2 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Beilstein Records (BRN): 900308  
 Beilstein Pref. RN (BPR): 1843-48-7  
 CAS Reg. No. (RN): 1843-48-7  
 Chemical Name (CN): 2,2',2''-(2,4,6-trioxo-<1,3,5>triazinane-1,3,5-triyl)-tris-acetamide  
 Autonom Name (AUN): 2-(3,5-bis-carbamoylmethyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetamide  
 Molec. Formula (MF): C9 H12 N6 O6  
 Molecular Weight (MW): 300.23  
 Lawson Number (LN): 30154, 3379  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 919322  
 Tautomer ID (TAUTID): 941945  
 Beilstein Citation (BSO): 5-26  
 Entry Date (DED): 1988/11/28  
 Update Date (DUPD): 1992/09/03



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1

BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d rx 2

L44 ANSWER 2 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Reaction:

RX

Reaction ID (.ID): 6182662  
 Product BRN (.PBRN): 900308  
 Product (.PRO): 2,2',2''-(2,4,6-trioxo-<1,3,5>triazinane-1,3,5-triyl)-tris-acetamide  
 No. of React. Details (.NVAR): 1

Reaction Details:

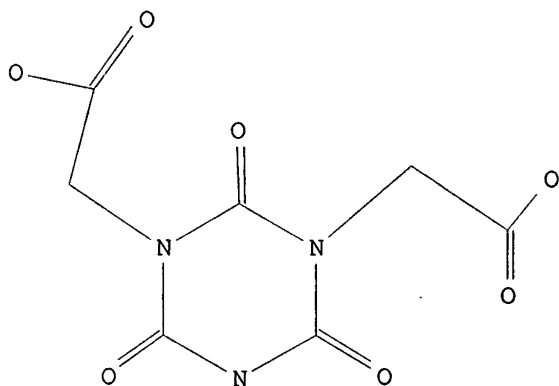
RX

Reaction RID (.RID): 6182662.1  
 Reaction Classification (.CL): Preparation (half reaction)  
 Reference(s):  
 1. Patent: Spencer Chem. Co. GB 988631 1961, Chem.Abstr., 63(620a), <1965>  
 2. Patent: Gulf Oil Corp. US 3230220 1961, Chem.Abstr., 64(9750a), <1966>

=&gt; d 144 3

## L44 ANSWER 3 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Beilstein Records (BRN): 824220  
 Beilstein Pref. RN (BPR): 49581-26-2  
 CAS Reg. No. (RN): 49581-26-2  
 Chemical Name (CN): 2,2'-(2,4,6-trioxo-<1,3,5>triazinane-1,3-diyl)-bis-acetic acid  
 Autonom Name (AUN): (3-carboxymethyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetic acid  
 Molec. Formula (MF): C7 H7 N3 O7  
 Molecular Weight (MW): 245.15  
 Lawson Number (LN): 30154, 3379  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 784947  
 Tautomer ID (TAUTID): 836723  
 Beilstein Citation (BSO): 5-26  
 Entry Date (DED): 1988/11/28  
 Update Date (DUPD): 1992/01/31



## Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1

MP Melting Point 1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d 3 rx

L44 ANSWER 3 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Reaction:

RX

Reaction ID (.ID): 6116879  
Product BRN (.PBRN): 824220  
Product (.PRO): 2,2'-(2,4,6-trioxo-<1,3,5>triazinane-1,3-diyl)-bis-acetic acid  
No. of React. Details (.NVAR): 1

Reaction Details:

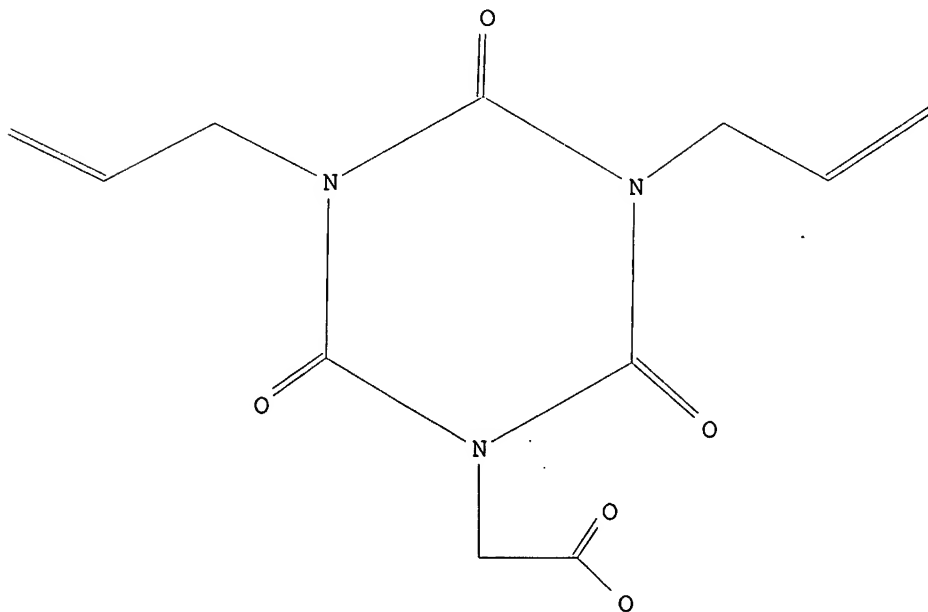
RX

Reaction RID (.RID): 6116879.1  
Reaction Classification (.CL): Preparation (half reaction)  
Reference(s):  
1. Khomenkova et al., Sov.Prog.Chem.(Engl.Transl.), CODEN: SPCHBV, 39(5), <1973>, 59, Ukr.Khim.Zh.(Russ.Ed.), CODEN: UKZHAU, 39(5), <1973>, 476

=&gt; d 4

L44 ANSWER 4 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Beilstein Records (BRN): 819851  
 Beilstein Pref. RN (BPR): 13915-42-9  
 CAS Reg. No. (RN): 13915-42-9  
 Chemical Name (CN): (3,5-diallyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetic acid  
 Autonom Name (AUN): (3,5-diallyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetic acid  
 Molec. Formula (MF): C11 H13 N3 O5  
 Molecular Weight (MW): 267.24  
 Lawson Number (LN): 30154, 3379, 2947  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 793650  
 Tautomer ID (TAUTID): 801213  
 Beilstein Citation (BSO): 5-26  
 Entry Date (DED): 1988/11/28  
 Update Date (DUPD): 1991/10/16



## Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1

AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
SLB	Solubility (MCS)	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d 4 rx

L44 ANSWER 4 OF 4 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL

Reaction:

RX

Reaction ID (.ID):	6113175
Product BRN (.PBRN):	819851
Product (.PRO):	(3,5-diallyl-2,4,6-trioxo-<1,3,5>triazinan-1-yl)-acetic acid
No. of React. Details (.NVAR):	1

Reaction Details:

RX

Reaction RID (.RID):	6113175.1
Reaction Classification (.CL):	Preparation (half reaction)
Reference(s):	
1. Balizkaja et al., J.Org.Chem.USSR (Engl.Transl.), CODEN: JOCYA9, 2, <1966>, 1409, Zh.Org.Khim., CODEN: ZORKAE, 2, <1966>, 1421	

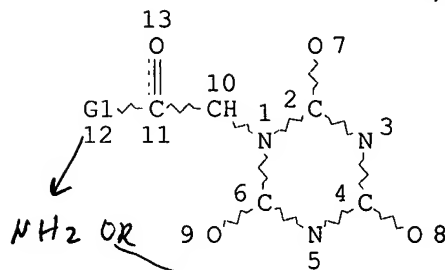
# Reg/HCAPLUS files search

EPPERSON 10/071,707

[=> d que 136 ]

L1 107 SEA FILE=HCAPLUS ABB=ON PLU=ON OSTRESH J?/AU  
 L2 5423 SEA FILE=HCAPLUS ABB=ON PLU=ON YU Y?/AU  
 L3 1022 SEA FILE=HCAPLUS ABB=ON PLU=ON HOUGHTEN R?/AU  
 L4 6440 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3)  
 L5 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND ?TRIAZIN?  
 L6 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND "1,3,5-TRIAZINE"  
 L7 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND "1,3,5-TRIAZINO"  
 L8 9 SEA FILE=HCAPLUS ABB=ON PLU=ON (L6 OR L7)  
 L9 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 AND "2,4,6-TRIONES" citation  
 L25 STR parent str

Inventor  
search



O@14 ← can be OH  
or o-metal

VAR G1=NH2/14  
 NODE ATTRIBUTES:  
 CONNECT IS E1 RC AT 14  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

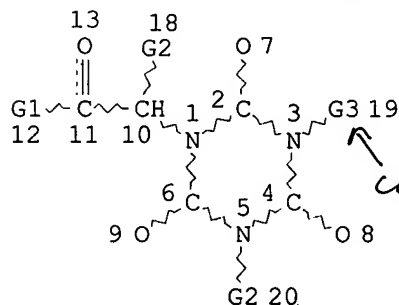
GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L27 54 SEA FILE=REGISTRY SSS FUL L25 54 cpds from parent str

L31 STR subset str

search



O@14  
 ↑ G1  
 Cb@17  
 ↑ any alkyl  
 any n carbocyclic

Ak@15  
 any alkyl  
 Cb or Ak can be substituted

i.e. Ak-Cb  
 +

VAR G1=NH2/14  
 VAR G2=H/15/17  
 VAR G3=17/15  
 NODE ATTRIBUTES:  
 CONNECT IS E1 RC AT 14  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L33 53 SEA FILE=REGISTRY SUB=L27 SSS FUL L31 53 cpds for subset searching  
L35 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 29 cites from 53 cpds  
L36 28 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 NOT L9 28 cites after  
subtracting out  
applicants' work, L9



=&gt; d ibib abs hitstr 136 1-28

L36 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:214787 HCAPLUS

DOCUMENT NUMBER: 138:222740

TITLE: Heat-resistant crosslinked polyester moldings with low mold shrinkage for electric parts

INVENTOR(S): Nishikawa, Shinya; Hayami, Hiroshi

PATENT ASSIGNEE(S): Sumitomo Electric Industries, Ltd., Japan; Sumitomo Electric Fine Polymer, Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003082132	A2	20030319	JP 2001-272972	20010910
PRIORITY APPLN. INFO.:			JP 2001-272972	20010910

AB The molding is obtained by melt molding a compn. comprising (A) 100 parts thermoplastic polyester having repeating units contg. (1) a terephalic acid-based arom. dicarboxylic acid, (2) an ethylene glycol-based aliph. diol and (3) a cyclhexanedimethanol-based alicyclic diol, with a mol ratio of (2)/(3) 80/20-20/80, (B) 0.1-20 parts multifunctional monomer contg. triallyl cyanurate; and exposing to ionizing radiation. Thus, 100 parts Eastargn 071 (phthalic acid-ethylene glycol-cyclohexanedimethanol copolymer) was mixed with triallyl cyanurate 5 and Irganox 1010 0.5 parts, injection molded and irradiated by electron beam to give a molding showing shrinkage in longitudinal direction 2.0% and in transverse direction 0.8% and storage elasticity (260.degree.) 4 x 10<sup>5</sup> Pa.

IT 501131-19-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(crosslinked; heat-resistant crosslinked polyester moldings with low mold shrinkage for elec. parts)

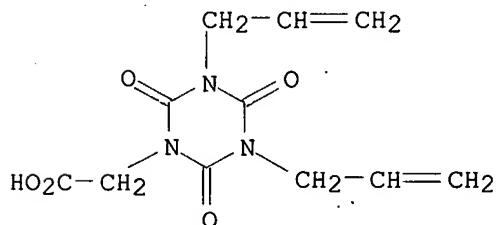
RN 501131-19-7 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with 1,4-cyclohexanedimethanol, 1,2-ethanediol and tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl-1,3,5-triazine-1(2H)-acetic acid (9CI) (CA INDEX NAME)

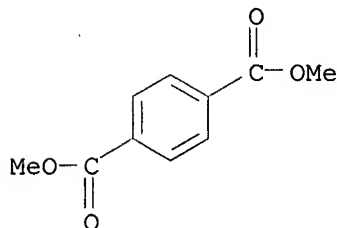
CM 1

CRN 13915-42-9

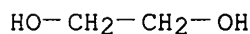
CMF C11 H13 N3 O5



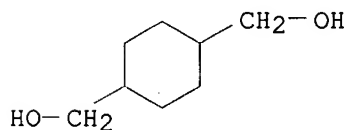
CM 2

CRN 120-61-6  
CMF C10 H10 O4

CM 3

CRN 107-21-1  
CMF C2 H6 O2

CM 4

CRN 105-08-8  
CMF C8 H16 O2

L36 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:915240 HCAPLUS

DOCUMENT NUMBER: 136:195583

TITLE: 3-(Heterocyclyl)phenyl cyanurates: synthesis and herbicidal activity

AUTHOR(S): Karp, Gary M.; Crews, A. Don; Manfredi, Mark C.; Kleemann, Axel; Arotin, Robert L.; Crawley, Matthew L.; Dahlke, Brian; Baerg, Roger

CORPORATE SOURCE: BASF Agro Research, Princeton, NJ, 08543-0400, USA

SOURCE: ACS Symposium Series (2002), 800 (Synthesis and Chemistry of Agrochemicals VI), 30-40

CODEN: ACSMC8; ISSN: 0097-6156

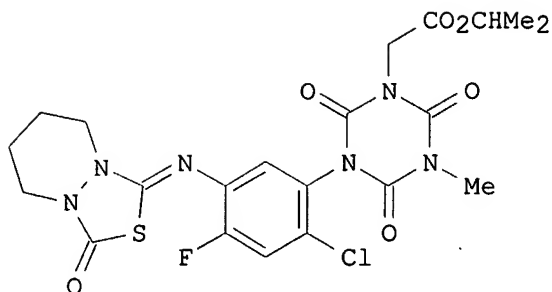
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:195583

GI

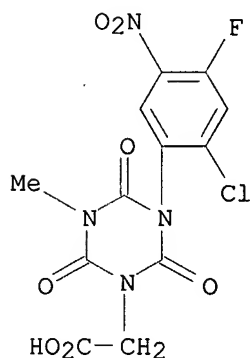


AB 3-(Heterocyclyl)phenyl cyanurates such as I make up a novel class of protoporphyrinogen oxidase (protox) inhibitors which were prepd. and evaluated for herbicidal activity. The compds. were primarily postemergence broadleaf compds. The effect of changes in the aryl moiety, the heteroaryl moiety, and in the pendant ester of the cyanurate moiety on the herbicidal activity of the heterocyclylaryl cyanurates was studied.

IT **185382-84-7P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and herbicidal activity of (heterocyclyl)phenyl cyanurate protoporphyrinogen oxidase inhibitors)

RN 185382-84-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-(2-chloro-4-fluoro-5-nitrophenyl)tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:260563 HCAPLUS

DOCUMENT NUMBER: 135:211623

TITLE: Preparation of polyamides and methylolated polyamides containing hexahydro-s-triazine and isocyanurate rings

AUTHOR(S): Pogosyan, G. M.; Danielyan, R. Dzh.; Oganessian, D. N.

CORPORATE SOURCE: Inst. Org. Khim., NAN Resp. Armeniya, Yerevan, Armenia

SOURCE: Khimicheskii Zhurnal Armenii (2000), 53(3-4), 104-110  
 CODEN: KZARF3; ISSN: 1561-4190

PUBLISHER: Izdatel'stvo Gitut'yun NAN Respubliki Armenii

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The polyamides and methylolated polyamides contg. hexahydro-s-triazine and

isocyanurate rings were prepd. and some properties characterized. 1,3,5-(P-Carboxyphenyl)hexahydro-s-triazine was prepd. by condensation of HCHO with p-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H and the product acid chlorinated with SOCl<sub>2</sub> to give 1,3,5-tris(p-chlorocarbonylphenyl)hexahydro-s-triazine. Interphase polycondensation of the latter compd. with 1,6-hexamethylenediamine (HMDA) gave polyamide I. 1,3-Di(carboxymethyl)isocyanurate was prepd. by condensation of disodium isocyanurate with ClCH<sub>2</sub>CO<sub>2</sub>Et and subsequent hydrolysis. The resulting intermediate was converted to acid chloride and polymd. with HMDA using interphase polycondensation method to give polyamide II. The polyamides I and II were methylolated with paraformaldehyde in Me<sub>2</sub>CHOH, in the presence of HCO<sub>2</sub>H.

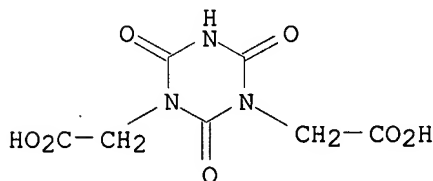
IT 49581-26-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and acid chlorination; prepn. of polyamides and methylolated polyamides contg. hexahydro-s-triazine and isocyanurate rings)

RN 49581-26-2 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:178149 HCAPLUS

DOCUMENT NUMBER: 128:217387

TITLE: Preparation of 1-(3-heterocyclyphenyl)-s-triazine-2,4,6-triones and related compounds as herbicides.  
INVENTOR(S): Crews, Alvin Donald, Jr.; Harrington, Philip Mark; Karp, Gary Mitchell; Manfredi, Mark Christopher; Guaciaro, Michael Anthony

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: U.S., '69 pp., Cont.-in-part of U.S. Ser. No. 459,868.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

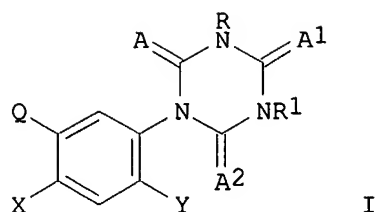
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5726126	A	19980310	US 1996-756750	19961126
PRIORITY APPLN. INFO.:		US 1995-459868	A2	19950602
OTHER SOURCE(S):		MARPAT 128:217387		

GI



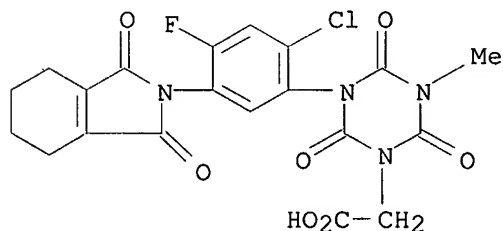
AB Title compds. [I; X, Y = H, halo, NO<sub>2</sub>, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, SOMR<sub>2</sub>; m = 0-2; R = H, alkyl, alkoxyalkyl, alkylcarbonylalkyl, haloalkylcarbonyl, alkoxyalkyl, alkynyl, alkali metal, (substituted) Ph, PhCH<sub>2</sub>; R<sub>1</sub> = H, alkenyl, alkynyl, cyano, (substituted) alkyl, Ph; R<sub>2</sub> = alkyl, haloalkyl, (substituted) Ph, PhCH<sub>2</sub>; A, A<sub>1</sub>, A<sub>2</sub> = O, S; Q = specified heterocyclyl], were prepd. Thus, 1-(5-amino-2-chloro-4-fluorophenyl)-3-methyl-s-triazine-2,4,6-trione was heated with 3,4,5,6-tetrahydrophthalic anhydride in HOAc at 100.degree. for 8 h to give 1-[4-chloro-2-fluoro-5-(hexahydro-3-methyl-2,4,6-trioxo-s-triazin-1-yl)phenyl]-1-cyclohexene-1,2-dicarboximide. Several I at 0.500 kg/ha postemergent gave 100% control of Abutilon theophrasti and Ambrosia artemisiifolia.

IT 185382-54-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-triones and related compds. as herbicides)

RN 185382-54-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:31166 HCAPLUS

DOCUMENT NUMBER: 128:102104

TITLE: Preparation of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-tri(thi)ones as herbicides.

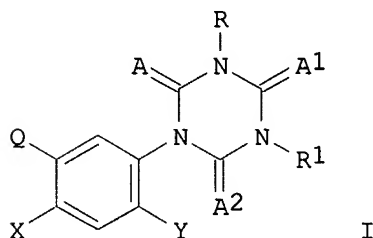
INVENTOR(S): Crews, Alvin Donald, Jr.; Harrington, Philip Mark; Karp, Gary Mitchell; Manfredi, Mark Christopher; Guaciaro, Michael Anthony

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: U.S., 50 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5705644	A	19980106	US 1996-690270	19960724
US 5872253	A	19990216	US 1997-896254	19970717
PRIORITY APPLN. INFO.:			US 1995-459567	A3 19950602
			US 1996-690270	A3 19960724
OTHER SOURCE(S):			MARPAT 128:102104	
GI				



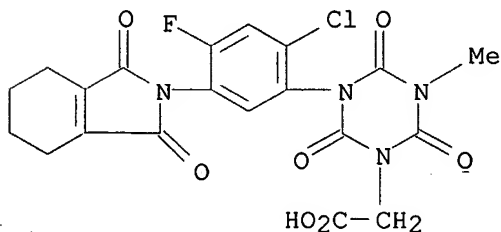
AB Title compds. [I; X, Y = H, halo, NO<sub>2</sub>, cyano, alkyl, haloalkyl, alkoxy, haloalkoxy, etc.; Q = specified 5-6 membered heterocyclyl; R = H, alkyl, alkoxyalkyl, alkylcarbonylalkyl, alkenyl, alkynyl, alkali metal, (substituted) Ph, PhCH<sub>2</sub>; R<sub>1</sub> = H, alkenyl, alkynyl, cyano, (substituted) alkyl, Ph; A, A<sub>1</sub>, A<sub>2</sub> = O, S], were prepd. Thus, Me 3-[2-chloro-5-(1-cyclohexene-1,2-dicarboximido)-4-fluorophenyl]tetrahydro-5-methyl-2,4,6-trioxo-s-triazine-1(2H)-acetate (prepn. given) at 0.125 kg/ha postemergent gave 100% control of Abutilon theophrasti.

IT 185382-54-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-tri(thi)ones as herbicides)

RN 185382-54-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



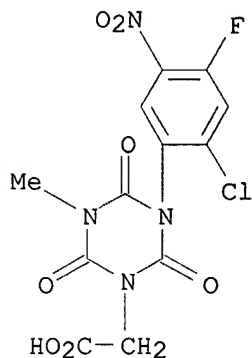
IT 185382-84-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-tri(thi)ones as herbicides)

RN 185382-84-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-(2-chloro-4-fluoro-5-nitrophenyl)tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:731820 HCAPLUS

DOCUMENT NUMBER: 128:6324

TITLE: Water-soluble rust inhibitor

INVENTOR(S): Fuchigami, Masaharu

PATENT ASSIGNEE(S): Yushiro Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09291381	A2	19971111	JP 1996-129106	19960424

PRIORITY APPLN. INFO.: JP 1996-129106 19960424

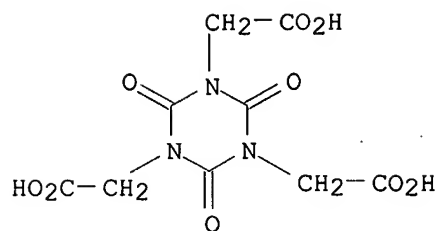
AB The rust inhibitor contains condensation products of urea or its derivs. and salts of alkali metals, alkali earth metals, and amines. The condensation product of urea is selected from cyanuric acid isocyanuric acid, hydantoic acid, and alantoin, and that of urea derivs. from tris(carboxymethyl) cyanuric acid, tris(carboxyethyl) cyanuric acid, tris(carboxymethyl) isocyanuric acid, and tris(carboxyethyl) isocyanuric acid.

IT 1968-52-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(water-sol. rust inhibitor)

RN 1968-52-1 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1997:689564 HCAPLUS  
 DOCUMENT NUMBER: 127:358879  
 TITLE: Preparation of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-oxo- or -thiotrione herbicidal agents  
 INVENTOR(S): Crews, Alvin Donald, Jr.; Karp, Gary Mitchell; Manfredi, Mark Christopher; Guaciaro, Michael Anthony  
 PATENT ASSIGNEE(S): American Cyanamid Company, USA  
 SOURCE: U.S., 49 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5679791	A	19971021	US 1996-686288	19960725
PRIORITY APPLN. INFO.:			US 1996-686288	19960725
OTHER SOURCE(S):			CASREACT 127:358879; MARPAT 127:358879	

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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

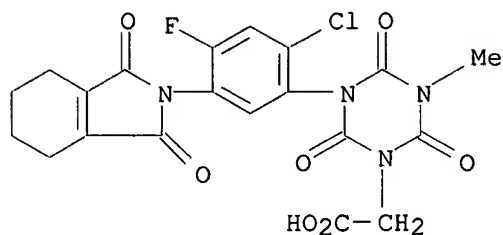
AB The title compds. [I; R = H, C1-6 alkyl, C2-12 alkoxyalkyl, etc.; R1 = H, C3-6 alkenyl, C3-6 alkynyl, etc.; R11, R12 = H, (un)substituted C1-6 alkyl, C3-6 cycloalkyl; R11R12 = (un)substituted 4-7 membered (un)satd. ring optionally interrupted by O, S(O)r, or N; A, A1, A2 = O, S; r = 0-2; X, Y = H, halo, NO2, CN], useful for the control of undesirable plant species, were prepd. by reacting an isothiocyanate II with a hydrazine R12NHNHR11 followed by reaction of the resulting intermediate III with phosgene or a phosgene equiv. in the presence of a base. Thus, the title compd. IV showed 100% efficacy against, e.g., common lambsquarters in preemergence test at 0.125 kg/ha.

IT **185382-54-1P**  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-oxo- or -thiotrione herbicidal agents)

RN 185382-54-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)





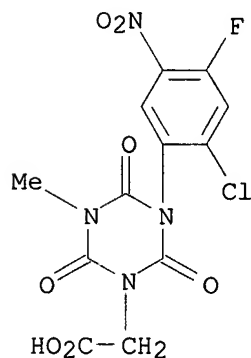
IT 185382-84-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-oxo- or -thiotrione herbicidal agents)

RN 185382-84-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-(2-chloro-4-fluoro-5-nitrophenyl)tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:72137 HCAPLUS

DOCUMENT NUMBER: 126:104106

TITLE: Preparation of 3-(3-aryloxyphenyl)-2,4,6-tri(thi)oxo-s-triazine-1-alkanoates as herbicides

INVENTOR(S): Crews, Alvin Donald, Jr.; Harrington, Philip Mark; Karp, Gary Mitchell; Gill, Simon David; Dieterich, Petra

PATENT ASSIGNEE(S): American Cyanamid Company, USA

SOURCE: Eur. Pat. Appl., 141 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 745595	A1	19961204	EP 1996-303970	19960531
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
US 5519133	A	19960521	US 1995-458336	19950602
US 5604180	A	19970218	US 1995-458635	19950602

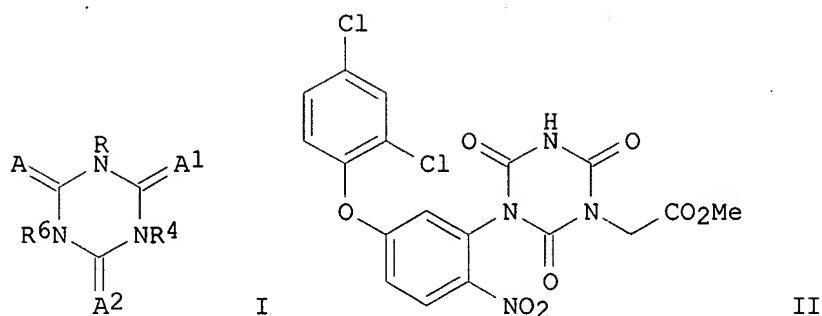
EPPERSON 10/071,707

US 5654256	A	19970805	US 1995-459439	19950602
US 5670641	A	19970923	US 1995-459562	19950602
US 5763605	A	19980609	US 1995-459155	19950602
ZA 9604440	A	19971209	ZA 1996-4440	19960530
US 5883282	A	19990316	US 1997-859188	19970520

PRIORITY APPLN. INFO.:

US 1995-458336	A	19950602
US 1995-458635	A	19950602
US 1995-459155	A	19950602
US 1995-459439	A	19950602
US 1995-459562	A	19950602

OTHER SOURCE(S):            MARPAT 126:104106  
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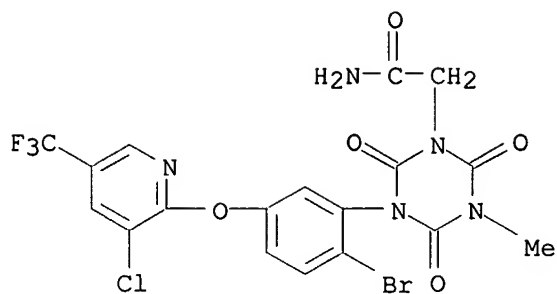


AB Title compds. [I; A,A1,A2 = O or S; R = H, alkyl, Ph, etc.; R4 = CR1R2(CHR3)nR5; R1 = H, alkyl, Ph, etc.; R2,R3 = H or alkyl; R1R2 = (CH2)2-5; R5 = CO2H, alkoxycarbonyl, alkanoyloxymethyl, etc.; R6 = ZOR7; R7 = (un)substituted Ph, -2-pyridyl, -2-pyrimidinyl, etc.; Z = (un)substituted 1,3-phenylene; n = 0-2] were prepd. Thus, 2,5-F(O2N)C6H3NHCONHCH2CO2Me was cyclocondensed with ClCONCO and the product etherified by 2,4-Cl2C6H3OH to give title compd. II. Data for biol. activity of I were given.

IT 179028-22-9P 179028-25-2P 185627-70-7P  
185627-74-1P  
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-(3-aryloxyphenyl)-2,4,6-tri(thi)oxo-s-triazine-1-alkanoates as herbicides)

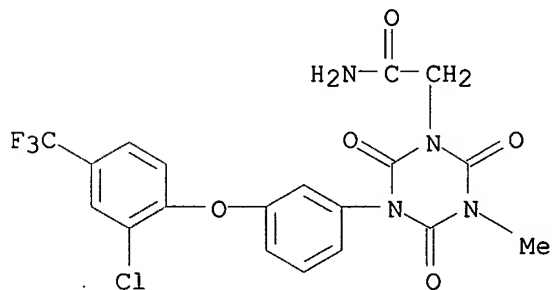
RN 179028-22-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[2-bromo-5-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]oxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo-(9CI) (CA INDEX NAME)



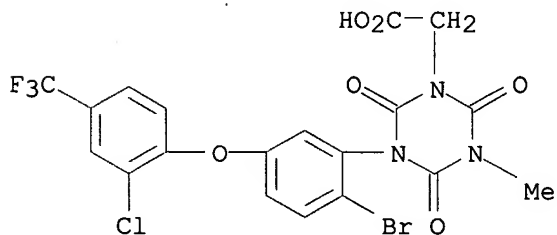
RN 179028-25-2 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[3-[2-chloro-4-(trifluoromethyl)phenoxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI)  
(CA INDEX NAME)



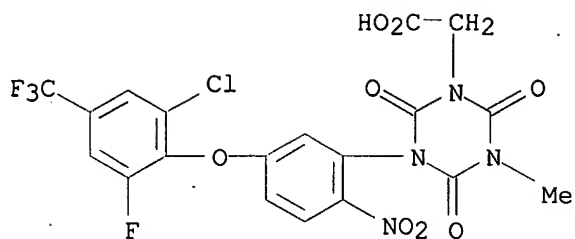
RN 185627-70-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-bromo-5-[2-chloro-4-(trifluoromethyl)phenoxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI)  
(CA INDEX NAME)



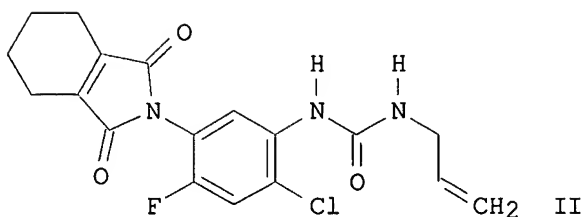
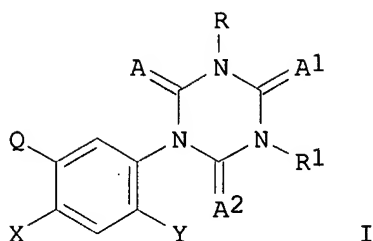
RN 185627-74-1 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[5-[2-chloro-6-fluoro-4-(trifluoromethyl)phenoxy]-2-nitrophenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1997:53895 HCAPLUS  
 DOCUMENT NUMBER: 126:74873  
 TITLE: Preparation of 1-(3-heterocyclylphenyl)-s-triazine-2,4,6-oxo(or thio)trione as herbicidal agents  
 INVENTOR(S): Crews, Alvin Donald, Jr.; Harrington, Philip Mark; Karp, Gary Mitchell; Manfredi, Mark Christopher; Guaciaro, Michael Anthony  
 PATENT ASSIGNEE(S): American Cyanamid Company, USA  
 SOURCE: Eur. Pat. Appl., 155 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 745599	A2	19961204	EP 1996-303836	19960529
EP 745599	A3	19970305		
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
US 5610120	A	19970311	US 1995-458639	19950602
US 5612481	A	19970318	US 1995-459567	19950602
US 5616706	A	19970401	US 1995-458211	19950602
US 5659031	A	19970819	US 1995-458324	19950602
JP 09025270	A2	19970128	JP 1996-156315	19960529
AU 9654603	A1	19961212	AU 1996-54603	19960530
AU 725805	B2	20001019		
ZA 9604442	A	19971209	ZA 1996-4442	19960530
CA 2177876	AA	19961203	CA 1996-2177876	19960531
CN 1138580	A	19961225	CN 1996-105323	19960531
BR 9602563	A	19981006	BR 1996-2563	19960531
PRIORITY APPLN. INFO.:			US 1995-458211	A 19950602
			US 1995-458324	A 19950602
			US 1995-458639	A 19950602
			US 1995-458920	A 19950602
			US 1995-459567	A 19950602
			US 1995-459868	A 19950602
			US 1995-459919	A 19950602
			US 1995-459950	A 19950602
OTHER SOURCE(S):		CASREACT 126:74873; MARPAT 126:74873		
GI				



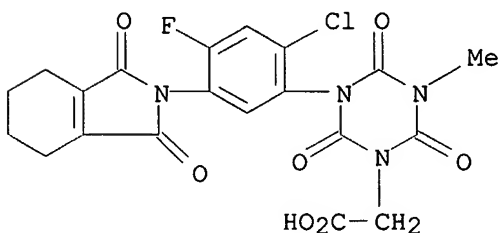
AB The title compds. [I; X, Y = H, halo, NO<sub>2</sub>, etc.; R = H, C1-6 alkyl, C2-12 alkoxyalkyl, etc.; R<sub>1</sub> = H, C3-6 alkenyl, C3-6 alkynyl, etc.; Q = heterocyclyl; A, A<sub>1</sub>, A<sub>2</sub> = O, S], useful for the control of undesirable plant species, were prepd. Thus, cyclization of urea II with N-(chlorocarbonyl)isocyanate in PhMe afforded I [X = F; Y = Cl; R = H; R<sub>1</sub> = CH<sub>2</sub>CH=CH<sub>2</sub>; Q = 1-cyclohexene-1,2-dicarboximido; A = A<sub>1</sub> = A<sub>2</sub> = O] which showed 91-99% control of Galium Aparine and Chenopodium Album, L. in postemergence herbicidal evaluation at 0.500 kg/ha.

IT 185382-54-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 1-(3-heterocyclphenyl)-s-triazine-2,4,6-oxo(or thio)trione as herbicidal agents)

RN 185382-54-1 HCAPLUS

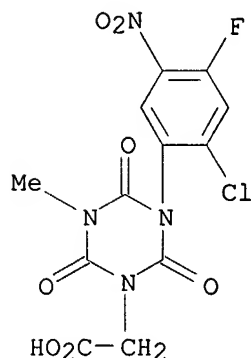
CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-chloro-4-fluoro-5-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



IT 185382-84-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. of 1-(3-heterocyclphenyl)-s-triazine-2,4,6-oxo(or thio)trione as herbicidal agents)

RN 185382-84-7 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetic acid, 3-(2-chloro-4-fluoro-5-nitrophenyl)tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1996:391589 HCAPLUS  
 DOCUMENT NUMBER: 125:59986  
 TITLE: Novel epoxy compounds with triazine ring skeleton and their manufacture  
 INVENTOR(S): Myake, Satoshi; Ikeda, Hisao; Hidaka, Motohiko; Moro, Takeo  
 PATENT ASSIGNEE(S): Nissan Chemical Ind Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08081461	A2	19960326	JP 1994-217042	19940912
JP 3368680	B2	20030120		

PRIORITY APPLN. INFO.: JP 1994-217042 19940912  
 OTHER SOURCE(S): MARPAT 125:59986

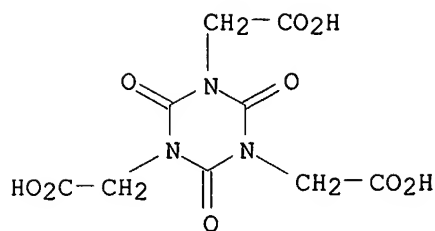
AB The epoxy compds. with good workability, giving resins with good weather and heat resistance are manufd. by addn. reaction of tri(carboxyalkyl)isocyanurates with epihalohydrins and treating the resulting esters with an alkali substance. Refluxing tri(carboxymethyl)isocyanurate 101, .alpha.-epichlorohydrin 625, and Me4N+ Cl-3 g at 100.degree. and adding 120 g 50% NaOH over 3 h while removing the formed water and unreacted reactant gave tri(carboxymethyl)isocyanurate triglycidyl ester (I). I 100, Me humic anhydride 90.5, and DMP 30 3 parts gave a cured resin with glass temp. 195.degree..

IT 1968-52-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with epichlorohydrin; manuf. of novel epoxy compds. with triazine ring skeleton for resins with good heat and weather resistance)

RN 1968-52-1 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:366128 HCAPLUS

DOCUMENT NUMBER: 125:114718

TITLE: 3-(3-Aryloxyphenyl)-1-(substituted methyl)-s-triazine-2,4,6-trione or -thiotrione herbicidal agents

INVENTOR(S): Crews, Alvin D., Jr.; Harrington, Philip M.; Karp, Gary M.; Gill, Simon D.; Dieterich, Petra

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: U.S., 49 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5519133	A	19960521	US 1995-458336	19950602
JP 09132569	A2	19970520	JP 1996-154730	19960528
AU 9654604	A1	19961212	AU 1996-54604	19960530
AU 719116	B2	20000504		
CA 2177916	AA	19961203	CA 1996-2177916	19960531
EP 745595	A1	19961204	EP 1996-303970	19960531
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1148592	A	19970430	CN 1996-105400	19960531
RU 2159769	C2	20001127	RU 1996-110414	19960531

PRIORITY APPLN. INFO.:

US 1995-458336	A	19950602
US 1995-458635	A	19950602
US 1995-459155	A	19950602
US 1995-459439	A	19950602
US 1995-459562	A	19950602

OTHER SOURCE(S): CASREACT 125:114718; MARPAT 125:114718

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. I wherein Ar is II-IV; M is CX<sub>4</sub> or N; X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub> and Y<sub>1</sub> are each independently, e.g., hydrogen, halogen, nitro, cyano; R<sub>4</sub> is C<sub>1</sub>-4 alkyl; Y is H or halo; A, A<sub>1</sub>, A<sub>2</sub> are each independently O or S; R is, e.g., H, C<sub>1</sub>-4 alkyl, C<sub>2</sub>-6 alkoxyalkyl; R<sub>1</sub> is, e.g., hydrogen, C<sub>1</sub>-4 alkyl or Ph optionally substituted with one to three halogen; R<sub>2</sub> is, e.g., hydrogen, C<sub>1</sub>-4 alkyl; or R<sub>1</sub>R<sub>2</sub> may represent (CH<sub>2</sub>)<sub>p</sub>, p = 2, 3, 4, 5; R<sub>3</sub> is hydrogen, C<sub>1</sub>-4 alkyl; n = 0, 1, 2; V is C(O)R<sub>6</sub>, C(W)R<sub>7</sub>, CH<sub>2</sub>OC(O)R<sub>8</sub> or

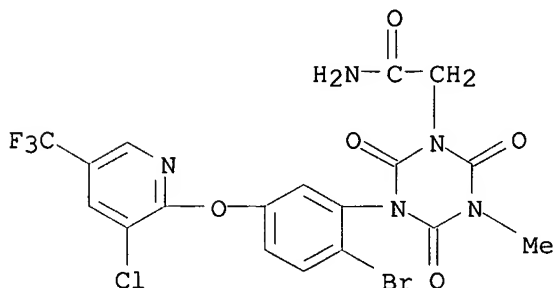
CH(OR<sub>9</sub>)<sub>2</sub>; R<sub>6</sub> is OH, OR<sub>10</sub>, SR<sub>10</sub> or NR<sub>11</sub>R<sub>12</sub>; W is O, NOR<sub>11</sub>, NCOR<sub>11</sub> or NNHCONH<sub>2</sub>; R<sub>7</sub> and R<sub>8</sub> are each independently hydrogen or C<sub>1</sub>-4 alkyl; R<sub>9</sub> is C<sub>1</sub>-4 alkyl; R<sub>10</sub> is C<sub>1</sub>-6 alkyl optionally substituted with, e.g., C<sub>1</sub>-4 alkoxy, C<sub>1</sub>-4 alkylthio; R<sub>11</sub> and R<sub>12</sub> are each independently, e.g., hydrogen, C<sub>1</sub>-6 alkyl, C<sub>2</sub>-6 alkoxy-carbonylalkyl are provided as herbicidal agents. Thus, e.g., 5-fluoro-2-nitrobenzoic acid was converted to the acid chloride and then to 5-fluoro-2-nitrobenzoyl azide; treatment of the latter with glycine Me ester hydrochloride afforded N-[(5-fluoro-2-nitrophenyl)carbamoyl]glycine Me ester which was cyclized with N-(chlorocarbonyl) isocyanate to afford trioxotriazine V; substitution with 2,4-dichlorophenol followed by methylation afforded VI which exhibited complete kill of, e.g., velvetleaf, sicklepod, and lambsquarters at 0.125 kg/ha postemergence. I were more effective herbicidal agents than prior-art 1,3,5-triazinones I with Ar = II, M = CX<sub>4</sub>, X = Cl, X<sub>1</sub> = H; X<sub>2</sub> = CF<sub>3</sub>, X<sub>3</sub> = H; X<sub>4</sub> = H, F; Y = H; Y<sub>1</sub> = H, halo, NO<sub>2</sub>; the A's are O; R = Me; and the group CR<sub>1</sub>R<sub>2</sub>(CHR<sub>3</sub>)<sub>n</sub>V is replaced by H.

IT 179028-22-9P 179028-25-2P 179028-38-7P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(3-(3-aryloxyphenyl)-1-(substituted methyl)-s-triazine-2,4,6-trione or -thiotrione herbicidal agents)

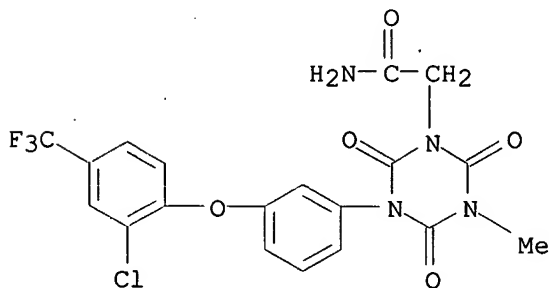
RN 179028-22-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[2-bromo-5-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]oxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)



RN 179028-25-2 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetamide, 3-[3-[2-chloro-4-(trifluoromethyl)phenoxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo- (9CI) (CA INDEX NAME)

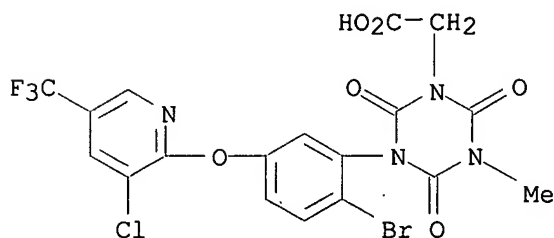


RN 179028-38-7 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, 3-[2-bromo-5-[[3-chloro-5-



(trifluoromethyl)-2-pyridinyl]oxy]phenyl]tetrahydro-5-methyl-2,4,6-trioxo-  
(9CI) (CA INDEX NAME)



L36 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:23139 HCAPLUS

DOCUMENT NUMBER: 118:23139

TITLE: Study of the structure and interaction of isocyanurates with a mineral filler

AUTHOR(S): Kotorlenko, L. A.; Novikova, O. A.

CORPORATE SOURCE: Inst. Probl. Materialoved., Kiev, USSR

SOURCE: Kompozitsionnye Polimernye Materialy (1979-1996?) (1990), 45, 1-8

CODEN: KPMAD8; ISSN: 0203-3275

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB To study the interaction of diallyl isocyanurate derivs. with glass fibers, allyl, hydroxypropyl, epoxypropyl, carboxymethyl, and hydroxyethyl diallyl isocyanates adsorbed on silica gel were studied as a model system by IR spectroscopy. The semipolarity of the carbonyl bonds in the isocyanates was confirmed. Interaction of OH groups of the silica gel surface with the isocyanurate ring was considered. The quality of fiber lubricants based on isocyanuric acid derivs. increased with an increasing no. of substituents capable of reaction with OH groups of the surface and increasing interaction.

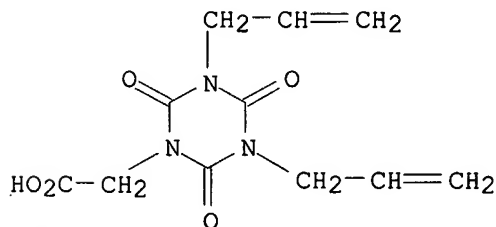
IT 13915-42-9

RL: PRP (Properties)

(interaction of, with glass fibers, model systems for detn. of)

RN 13915-42-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl- (9CI) (CA INDEX NAME)



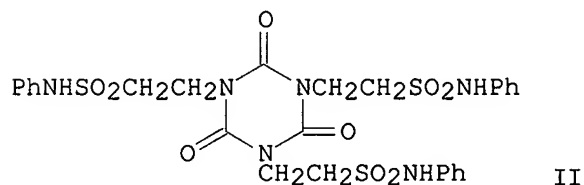
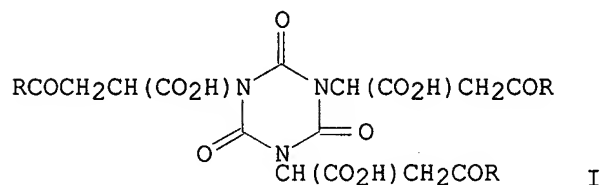
L36 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:56074 HCAPLUS

DOCUMENT NUMBER: 108:56074

TITLE: Reaction of cyanuric acid with some electrophilic olefins

AUTHOR(S): Babayan, A. A.; Agbalyan, S. G.  
 CORPORATE SOURCE: Inst. Org. Khim., Yerevan, USSR  
 SOURCE: Armyanskii Khimicheskii Zhurnal (1987), 40(4), 261-3  
 CODEN: AYKZAN; ISSN: 0515-9628  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 108:56074  
 GI

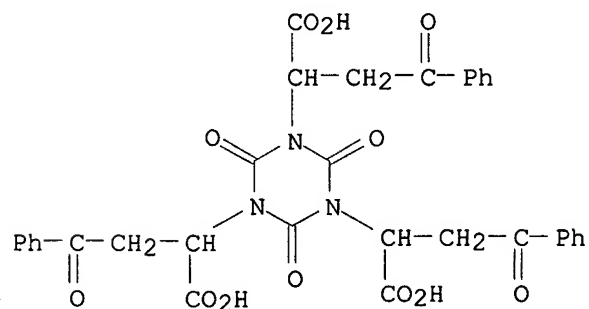


AB Addn. of cyanuric acid to  $\text{RCOCH:CHCO}_2\text{H}$  in DMF contg. Katamin AB 4 h at 120-150.degree. gave 66-90% triazines I. Similar addn. of  $\text{CH}_2\text{:CHSO}_2\text{NHPh}$  gave 9% triazine II.

IT 112430-04-3P 112430-05-4P 112430-06-5P  
 112430-07-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

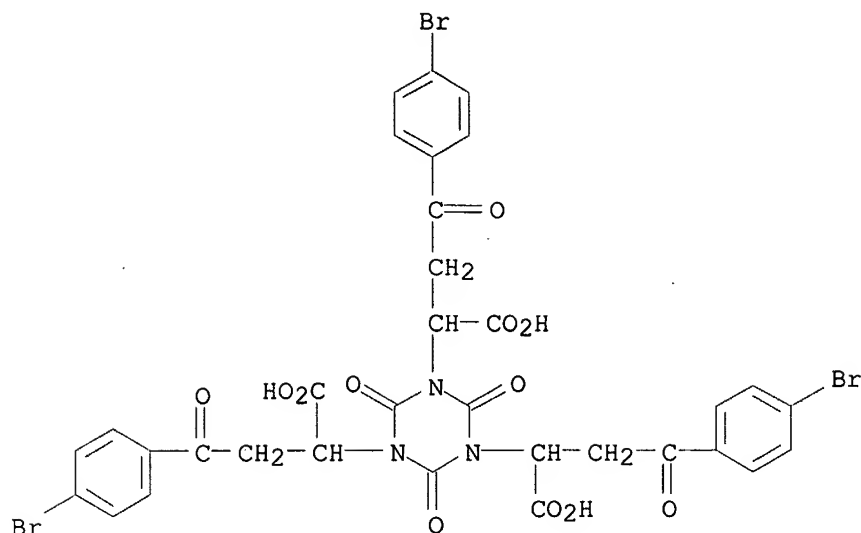
RN 112430-04-3 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo-  
 .alpha.,.alpha.',.alpha.''-tris(2-oxo-2-phenylethyl)- (9CI) (CA INDEX NAME)



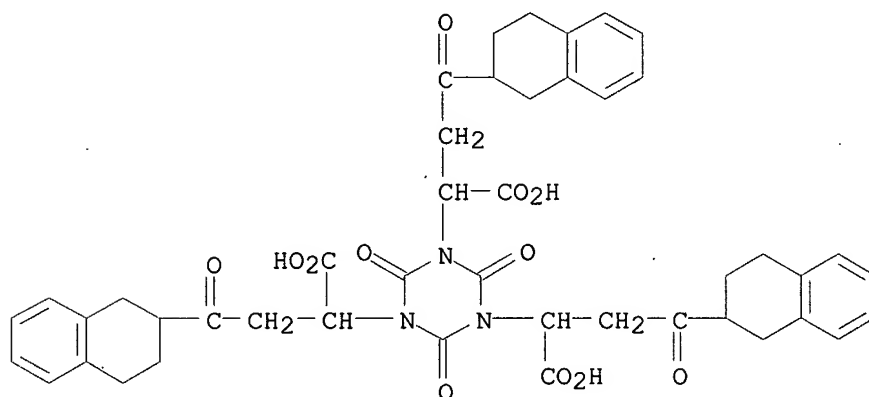
RN 112430-05-4 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, .alpha.,.alpha.',.alpha.''-  
 tris[2-(4-bromophenyl)-2-oxoethyl]-2,4,6-trioxo- (9CI) (CA INDEX NAME)



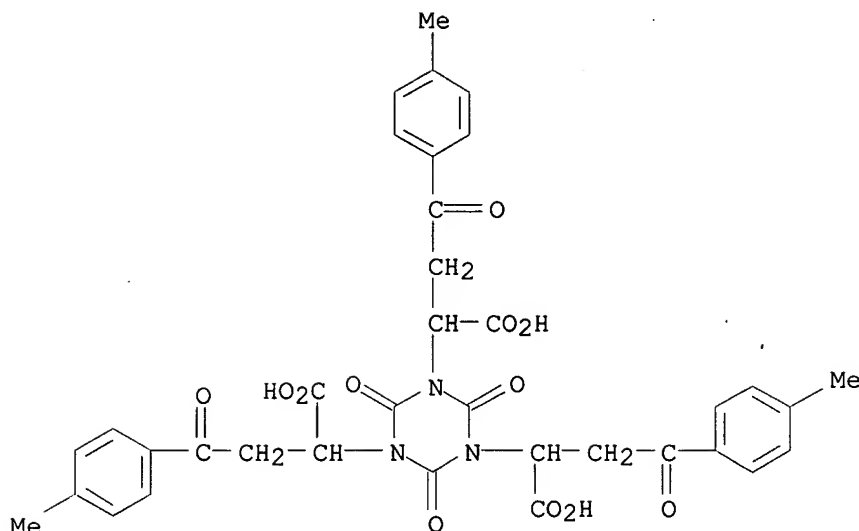
RN 112430-06-5 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo-.alpha.,.alpha.',.alpha.''-tris[2-oxo-2-(1,2,3,4-tetrahydro-2-naphthalenyl)ethyl]- (9CI) (CA INDEX NAME)



RN 112430-07-6 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, .alpha.,.alpha.',.alpha.''-tris[2-(4-methylphenyl)-2-oxoethyl]-2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:478911 HCAPLUS

DOCUMENT NUMBER: 105:78911

TITLE: Reaction of N-substituted maleic acid imides with cyanuric acid and its derivatives

AUTHOR(S): Esayan, G. T.; Babayan, A. A.; Nersesyan, L. A.; Agbalyan, S. G.

CORPORATE SOURCE: Inst. Org. Khim., Yerevan, USSR

SOURCE: Armyanskii Khimicheskii Zhurnal (1985), 38(5), 300-4

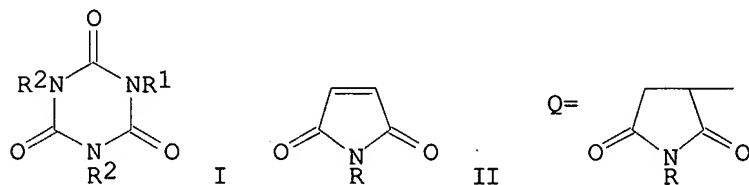
CODEN: AYKZAN; ISSN: 0515-9628

DOCUMENT TYPE: Journal

LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 105:78911

GI



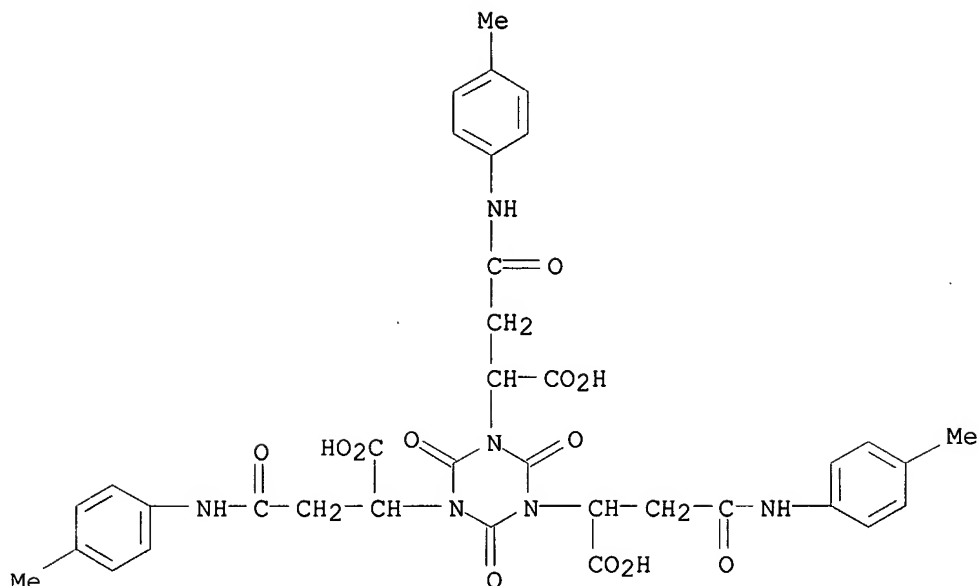
AB Treating cyanuric acid I ( $R_1 = R_2 = H$ ) with maleimide II ( $R = Ph, p\text{-tolyl}, p\text{-MeOC}_6\text{H}_4, p\text{-O}_2\text{NC}_6\text{H}_4$ ) gave 62-98% I ( $R_1 = R_2 = Q$ ) which ( $R = p\text{-tolyl}$ ) was hydrolyzed to give 67% I [ $R_1 = R_2 = CH(CO_2H)CH_2CONHC_6H_4Me\text{-}p$ ]. Similarly, I ( $R_1 = CH_2CH:CHClMe, R_2 = H$ ) gave 44-79% I ( $R_1 = \text{same}, R_2 = Q$ ) and I ( $R_1 = H, R_2 = \text{allyl}$ ) gave 58-85% I ( $R_1 = Q, R_2 = \text{same}$ ).

IT 103761-64-4P

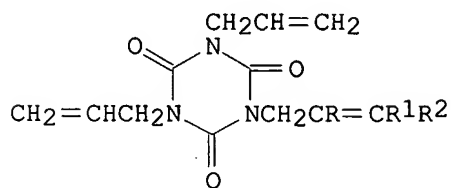
RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 103761-64-4 HCAPLUS

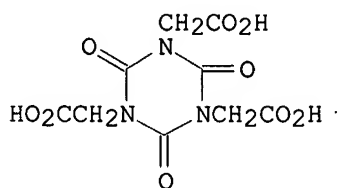
CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, .alpha.,.alpha.',.alpha.''-tris[2-[(4-methylphenyl)amino]-2-oxoethyl]-2,4,6-trioxo- (9CI) (CA INDEX



GI



I



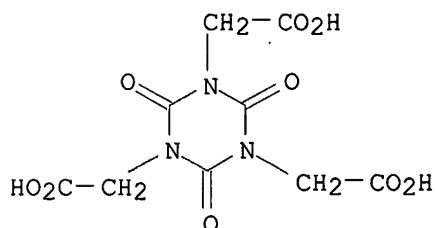
III

AB Oxidn. of isocyanurate I (R = H, R1 = Cl, R2 = Me) (II) gave 43.3% triacid III;  $\text{H}_2\text{C}:\text{CHCH}_2\text{NHCONHCH}_2\text{CH}:\text{CClMe}$  was obtained in 40% yield by alk. hydrolysis of II. I (R = R1 = H, R2 = Me, Ph; R = H, R1 = R2 = Me; R = Me, R1 = R2 = H) were obtained in 51.0-80.5% yield by reaction of the Na salt of diallylisocyanurate with the corresponding chloride or bromide.

IT 1968-52-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 1968-52-1 HCAPLUS  
 CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1978:23822 HCAPLUS

DOCUMENT NUMBER: 88:23822

TITLE: Block polymers from isocyanurate-based polyesters and conventional polyester segments

INVENTOR(S): Herweh, John E.; Whitmore, William Y.

PATENT ASSIGNEE(S): Armstrong Cork Co., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4053538	A	19771011	US 1976-675453	19760409
PRIORITY APPLN. INFO.:			US 1976-675453	19760409

AB Linear, segmented polymers which had good thermal and mech. properties and which did not require crosslinking were prepd. by coupling a hard and a soft segment such that the difference between the glass transition temp. (Tg) of the hard and soft segment was 50-200.degree., and preferably 100-60.degree.. Thus, 1,3-bis(3-carboxypropyl)-5-phenylisocyanurate (I)-ethylene glycol copolymer [53192-69-1] (Tg = -57.degree.) was prepd. and coupled with hydroxy-terminated polycaprolactone (Tg = 81.degree.) (65:35, resp.) in the presence of bis(4-isocyanatocyclohexyl)methane coupler to give a segmented block polymer [64945-99-9] of mol. wt. 31,700, elongation 60%, tensile strength 3636, and which was cast into a hard, flexible, clear film. I [53192-68-0] was prepd. by hydrolysis of 1,3-bis(3-carbethoxypropyl)-5-phenylisocyanurate [53193-75-2] which was prepd. by alkylation of disodium phenylisocyanurate [53193-76-3] with ethyl-3-chlorobutyrate [7425-48-1].

IT 64945-97-7P 64945-98-8P

RL: PREP (Preparation)

(block, segmented, prepn. and characterization of)

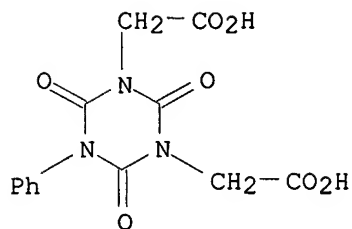
RN 64945-97-7 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-, polymer with 1,2-ethanediol, 1,1'-methylenebis[4-isocyanatocyclohexane] and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6

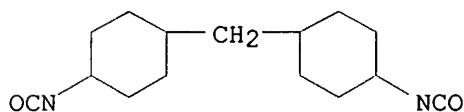
CMF C13 H11 N3 O7



CM 2

CRN 5124-30-1

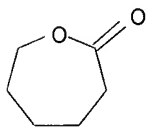
CMF C15 H22 N2 O2



CM 3

CRN 502-44-3

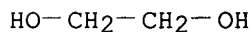
CMF C6 H10 O2



CM 4

CRN 107-21-1

CMF C2 H6 O2



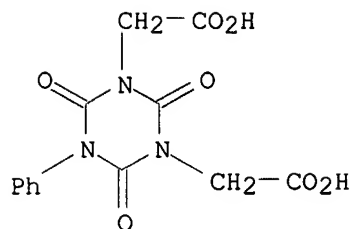
RN 64945-98-8 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-, polymer with 1,4-benzenedicarboxylic acid, 1,2-ethanediol and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6

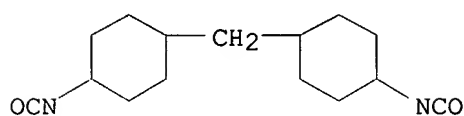
CMF C13 H11 N3 O7



CM 2

CRN 5124-30-1

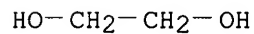
CMF C15 H22 N2 O2



CM 3

CRN 107-21-1

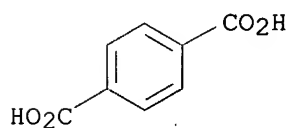
CMF C2 H6 O2



CM 4

CRN 100-21-0

CMF C8 H6 O4



IT 53192-64-6P 53192-74-8P 53192-77-1P

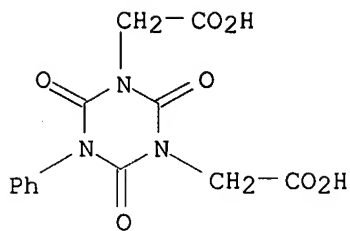
RL: PREP (Preparation)

(prepn. of)

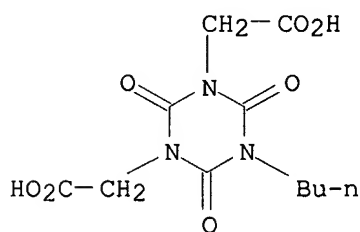
RN 53192-64-6 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-  
(9CI) (CA INDEX NAME)

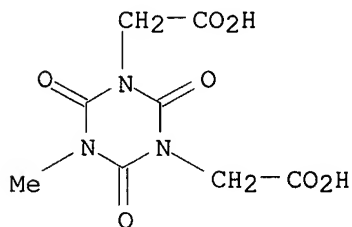




RN 53192-74-8 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, 5-butyldihydro-2,4,6-trioxo-  
 (9CI) (CA INDEX NAME)



RN 53192-77-1 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-5-methyl-2,4,6-trioxo-  
 (9CI) (CA INDEX NAME)



L36 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1977:6347 HCAPLUS  
 DOCUMENT NUMBER: 86:6347  
 TITLE: Linear polyesters containing isocyanurate rings  
 INVENTOR(S): Kauffman, William J.  
 PATENT ASSIGNEE(S): Armstrong Cork Co., USA  
 SOURCE: U.S., 4 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3962192	A	19760608	US 1974-537688	19741231
PRIORITY APPLN. INFO.:			US 1974-537688	19741231
AB 1,3-Bis(carboxymethyl)-5-phenylisocyanurate-1,4-butanediol polymer (I) [				

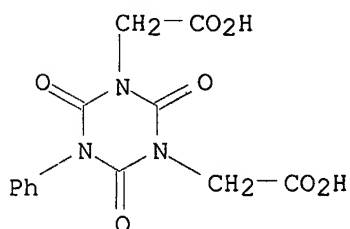
53192-70-4] is useful in the prepn. of strong elastic fibers and films. Thus, 249 g disodium phenylisocyanurate [53193-76-3] in 2000 ml DMF was heated 8 hr at 75.degree. with 269.6 g ClCH<sub>2</sub>CO<sub>2</sub>Et to give 1,3-bis(carbethoxymethyl)-5-phenylisocyanurate [53193-74-1] which was hydrolyzed to 1,3-bis(carboxymethyl)-5-phenylisocyanurate (II) [53192-64-6]. Polymn. of II 20, 1,4-butanediol 50, and dibutyltin dilaurate 0.2 g gave I.

IT 53192-64-6P 53192-70-4P 53192-71-5P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of)

RN 53192-64-6 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-  
(9CI) (CA INDEX NAME)



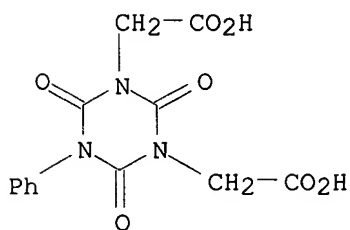
RN 53192-70-4 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-,  
polymer with 1,4-butanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6

CMF C13 H11 N3 O7



CM 2

CRN 110-63-4

CMF C4 H10 O2

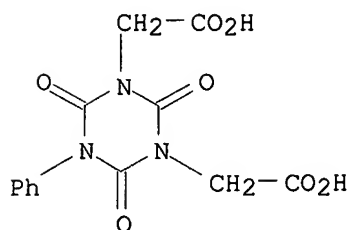
HO-(CH<sub>2</sub>)<sub>4</sub>-OH

RN 53192-71-5 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-,  
polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6  
CMF C13 H11 N3 O7



CM 2

CRN 629-11-8  
CMF C6 H14 O2

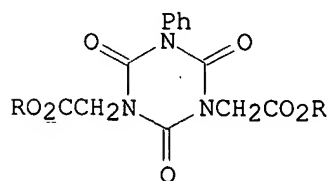
HO-(CH<sub>2</sub>)<sub>6</sub>-OH

L36 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1976:494892 HCAPLUS  
DOCUMENT NUMBER: 85:94892  
TITLE: Isocyanurate compounds  
INVENTOR(S): Kauffman, William J.  
PATENT ASSIGNEE(S): Armstrong Cork Co., USA  
SOURCE: U.S., 3 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3957778	A	19760518	US 1974-537689	19741231
PRIORITY APPLN. INFO.:			US 1974-537689	19741231
GI				



I

AB Disodium phenylisocyanurate [53193-76-3] is treated with Et chloroacetate [105-39-5] in an inert solvent at 25-150.degree. to give

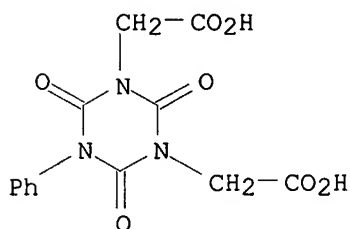
1,3-bis(ethoxycarbonylmethyl)-5-phenylisocyanurate (I, R = Et) [53193-74-1], which is saponified to give 1,3-bis(carboxymethyl)-5-phenylisocyanurate (I, R = H) [53192-64-6]. Polyesters based on these compounds have excellent strength and elasticity and are useful in fiber preparation.

IT 53192-64-6P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, for polyesters)

RN 53192-64-6 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-  
(9CI) (CA INDEX NAME)



L36 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1974:570113 HCAPLUS

DOCUMENT NUMBER: 81:170113

TITLE: Linear polyesters containing isocyanurate rings

AUTHOR(S): Kauffman, W. J.

CORPORATE SOURCE: Res. Dev. Cent., Armstrong Cork Co., Lancaster, PA,  
USA

SOURCE: Journal of Polymer Science, Polymer Chemistry Edition  
(1974), 12(8), 1735-43  
CODEN: JPLCAT; ISSN: 0449-296X

DOCUMENT TYPE: Journal

LANGUAGE: English

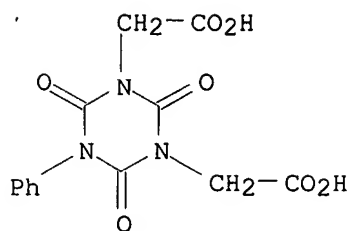
AB Linear polyesters containing isocyanurate rings (such as 1,3-bis(carboxymethyl) 5-phenyl isocyanurate-ethylene glycol copolymer [53192-65-7], etc.) were prepared to determine the effect of structural variations on thermal and solubility properties. The substituent on the isocyanurate ring and the length of the acid side chain affected the glass transition temperature. The series of polyesters from bis(carboxymethyl) phenyl isocyanurate and diols showed different solubilities. Thermal gravimetric analysis indicated that structural differences had no significant effect on the thermal stability of the polyesters.

IT 53192-64-6P 53192-74-8P 53192-77-1P

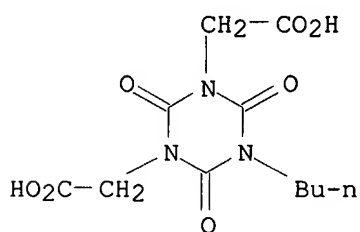
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 53192-64-6 HCAPLUS

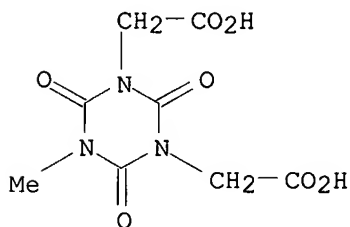
CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-  
(9CI) (CA INDEX NAME)



RN 53192-74-8 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, 5-butylldihydro-2,4,6-trioxo-  
 (9CI) (CA INDEX NAME)



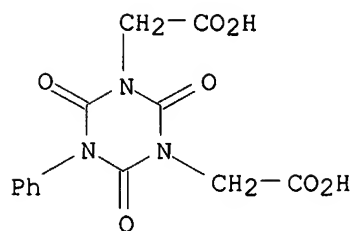
RN 53192-77-1 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-5-methyl-2,4,6-trioxo-  
 (9CI) (CA INDEX NAME)



IT 53192-65-7 53192-70-4 53192-71-5  
 53192-75-9 53192-76-0 53192-78-2  
 53192-79-3  
 RL: PROC (Process)  
 (thermal gravimetric anal. of)  
 RN 53192-65-7 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-,  
 polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

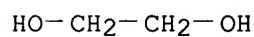
CRN 53192-64-6  
 CMF C13 H11 N3 O7



CM 2

CRN 107-21-1

CMF C2 H6 O2



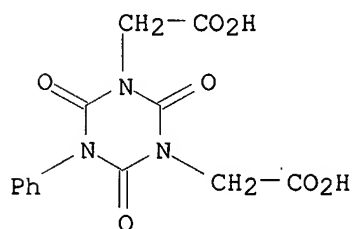
RN 53192-70-4 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6

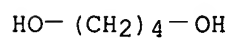
CMF C13 H11 N3 O7



CM 2

CRN 110-63-4

CMF C4 H10 O2



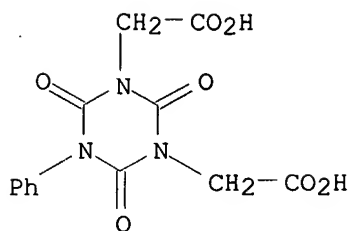
RN 53192-71-5 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo-5-phenyl-, polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-64-6

CMF C13 H11 N3 O7



CM 2

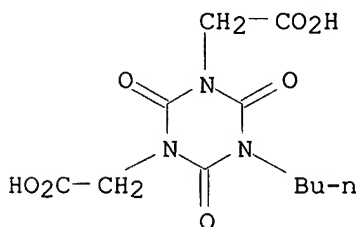
CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

RN 53192-75-9 HCAPLUS  
CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, 5-butyldihydro-2,4,6-trioxo-,  
polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-74-8  
CMF C11 H15 N3 O7



CM 2

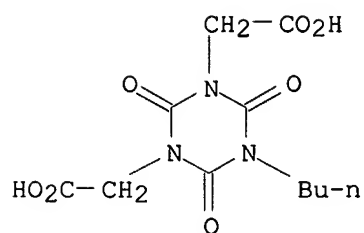
CRN 107-21-1  
CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

RN 53192-76-0 HCAPLUS  
CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, 5-butyldihydro-2,4,6-trioxo-,  
polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-74-8  
CMF C11 H15 N3 O7



CM 2

CRN 629-11-8

CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

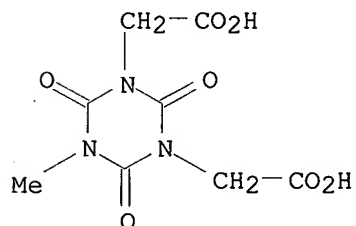
RN 53192-78-2 HCAPLUS

CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-5-methyl-2,4,6-trioxo-, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-77-1

CMF C8 H9 N3 O7



CM 2

CRN 107-21-1

CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

RN 53192-79-3 HCAPLUS

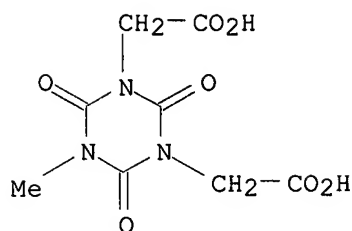
CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-5-methyl-2,4,6-trioxo-, polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 53192-77-1

CMF C8 H9 N3 O7





CM 2

CRN 629-11-8  
CMF C6 H14 O2HO-(CH<sub>2</sub>)<sub>6</sub>-OH

L36 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1974:536892 HCAPLUS

DOCUMENT NUMBER: 81:136892

TITLE: Dependence of the physicommechanical properties of glass fiber-reinforced polyester plastics on the surface treatment of the glass fiber

AUTHOR(S): Abraimova, V. P.; Novikova, O. A.; Shevlyakov, A. S.

CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR

SOURCE: Sintez i Fiziko-Khimiya Polimerov (1974), 13, 150-3  
CODEN: SFKPAO; ISSN: 0583-4317

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Surface treatment of glass fibers, used as reinforcement for polyester resins, with diallyl hydroxyethyl isocyanurate (I) [839-88-3], diallyl epoxypropyl isocyanurate (II) [20395-16-8], diallyl carboxymethyl isocyanurate (III) [13915-42-9] and diallyl hydroxybutyl isocyanurate (IV) [52794-84-0] was examd. in fibers contg. I and II as lubricants showed increased phys. mech. and elec. properties, compared to those treated with paraffin emulsions. I and II increased the resistance to water and cross-breaking strength of fibers, due to their soly. in water and softening of the fiber surface. They polymerize by themselves and contained allyl group which interacted with double bonds in unsatd. compds., forming a strong bond between the resins and glass fiber surface. The cryst. III had good adhesion properties but the lubricant film was rigid, brittle and decomposed on processing, whereas IV was unstable in storage, and the strength of fibers contg. it decreased significantly on exposure to water. Mech. properties of plastics contg. lubricants were directly dependent on their water absorption.

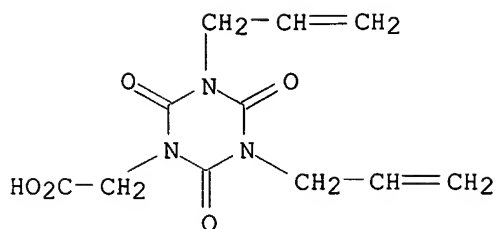
IT 13915-42-9

RL: USES (Uses)

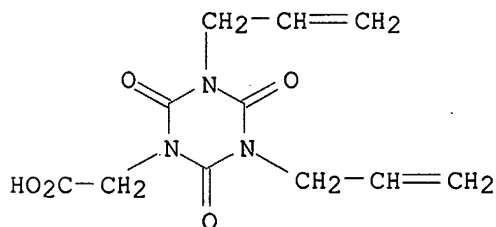
(lubricants, for glass fiber, mech. and elec. properties of reinforced plastics in presence of)

RN 13915-42-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl- (9CI) (CA INDEX NAME)

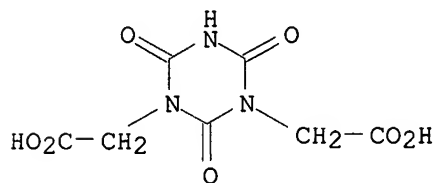


L36 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1974:71501 HCAPLUS  
 DOCUMENT NUMBER: 80:71501  
 TITLE: Evaluation of the effectiveness of potential finishing agents-lubricants  
 AUTHOR(S): Fainerman, A. E.; Lipatov, Yu. S.; Novikova, O. A.; Samoilenko, M. I.; Ivanova, G. V.  
 CORPORATE SOURCE: USSR  
 SOURCE: Plasticheskie Massy (1973), (9), 38-40  
 CODEN: PLMSAI; ISSN: 0554-2901  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB The effectiveness of 14 lubricants and finishing agents for glass reinforced plastic, such as diallyl isocyanurate (I) [6294-79-7] and 12 alkyl derivs. such as hydroxyethyl diallyl isocyanurate (II) [839-88-3], 3-hydroxypropyl diallyl isocyanurate (III) [50978-73-9], or 4-hydroxybutyl diallyl isocyanurate (IV) [43193-30-2] was evaluated from surface tension data. The surface tension steadily decreased in the order II > III > IV. The phys. mech. properties of glass reinforced plastics modified with I derivs. were detd.  
 IT **13915-42-9**  
 RL: USES (Uses)  
 (lubricants, for glass fiber-reinforced plastics)  
 RN 13915-42-9 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl- (9CI) (CA INDEX NAME)



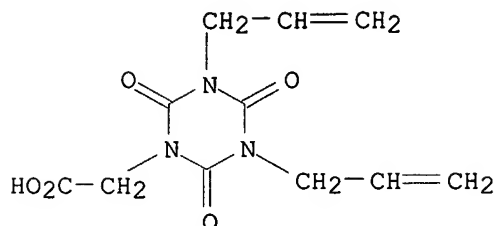
L36 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1973:505198 HCAPLUS  
 DOCUMENT NUMBER: 79:105198  
 TITLE: Synthesis of isocyanurates  
 AUTHOR(S): Khomenkova, K. K.; Frenkel, S. A.; Kornev, K. A.  
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin, Kiev, USSR  
 SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1973), 39(5), 476-9  
 CODEN: UKZHAU; ISSN: 0041-6045

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 GI For diagram(s), see printed CA Issue.  
 AB Isocyanurates (I; R = H, CH<sub>2</sub>CH:CH<sub>2</sub>, CH<sub>2</sub>CO<sub>2</sub>CHCH:CH<sub>2</sub>, Bu, CH<sub>2</sub>CO<sub>2</sub>Et; R<sub>1</sub> = CH<sub>2</sub>CO<sub>2</sub>H, CH<sub>2</sub>CO<sub>2</sub>Et, CH<sub>2</sub>CO<sub>2</sub>Bu, CH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>CH:CH<sub>2</sub>, Bu, hexyl, octyl, CH<sub>2</sub>CH<sub>2</sub>CN) were obtained in 50-90% yield by alkylation of mono-, di-, or trisodium cyanurate with the appropriate alkyl halide or chloroacetate.  
 IT **49581-26-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49581-26-2 HCAPLUS  
 CN 1,3,5-Triazine-1,3(2H,4H)-diacetic acid, dihydro-2,4,6-trioxo- (9CI) (CA INDEX NAME)



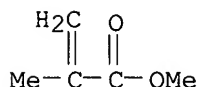
L36 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1972:488907 HCAPLUS  
 DOCUMENT NUMBER: 77:88907  
 TITLE: Polymerization of alkyl diallyl isocyanurates  
 AUTHOR(S): Khomenkova, K. K.; Balitskaya, L. G.; Kornev, K. A.  
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR  
 SOURCE: Sintez i Fiziko-Khimiya Polimerov (1971), No. 9, 30-3  
 CODEN: SFKPAO; ISSN: 0583-4317  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB The polymn. rate of 1-alkyl 3,5-diallyl isocyanurates, e.g. 1-carbethoxymethyl 3,5-diallyl isocyanurate [13915-41-8], 1-.beta.-cyanoethyl 3,5-diallyl isocyanurate [13915-46-3], 1-.beta.-hydroxyethyl 3,5-diallyl isocyanurate [839-88-3], or 1-ethyl 3,5-diallyl isocyanurate [5320-27-4], exceeded the polymn. rate of triallyl isocyanurate [1025-15-6] or triallyl cyanurate [101-37-1]. The polymn. rate was only slightly affected by the substituent with the exception of 1-.beta.-bromoethyl 3,5-diallyl isocyanurate [13915-44-1]. The bulk copolymn. of 1-alkyl 3,5-diallyl isocyanurates with Me methacrylate gave heat resistant, transparent copolymers, almost insol. in org. solvents. The copolymers, e.g., 1-carboxymethyl 3,5-diallyl isocyanurate-methyl methacrylate copolymer [35918-97-9] exceeded poly(Me methacrylate) [9011-14-7] in heat resistance, but had comparable tensile strength, flexural strength, and impact strength.  
 IT **35918-97-9**  
 RL: PRP (Properties)  
 (heat resistance of)  
 RN 35918-97-9 HCAPLUS  
 CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 13915-42-9

CMF C11 H13 N3 O5



CM 2

CRN 80-62-6  
CMF C5 H8 O2



L36 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1968:497783 HCAPLUS

DOCUMENT NUMBER: 69:97783

TITLE: Coating compositions comprising styrene interpolymers, aminoplast, and hydroxy-containing polyester

INVENTOR(S): Hill, Robert W.; Galiano, Francis R.

PATENT ASSIGNEE(S): Gulf Oil Corp.

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3402219	A	19680917	US 1965-447082	19650409
PRIORITY APPLN. INFO.:			US 1965-447082	19650409

GI For diagram(s), see printed CA Issue.

AB A solvent soln. useful for coating thermoplastic polymer articles is described. It contains a curable mixt. of a OH-contg. interpolymers of styrene, curable aminoplasts, and a OH-contg. polyester of OH no. 120-80. Thus, 414 g. 2,4,6-trioxo-s-triazine-1,3,5-(2H,4H,6H)-tripropionic acid (I) and 292 g. neopentyl glycol were heated for 2 hrs. at 120.degree., 68.5 g. adipic acid was added, and the mixt. was heated at 120-5.degree. for 6 hrs. and at 145-50.degree. for 3 hrs. to give a product (I) of acid no. 50-5 and OH no. 140. Then, 5 parts hydrogenated styrene-methacrolein copolymer contg. 63% styrene, 9.8% OH groups, and mol. wt. 8000, 2.7 parts hexakis(methoxymethyl)melamine, 8 parts I, and 0.3 part p-toluenesulfonic acid were dissolved in dioxane, the soln. was dild. to 17% component salts, then coated onto a polyethylene bottle, cured at 83.degree. for 15 min. with no flash-off time necessary to give a film tack free on removal from the oven. Gloss, adhesion, and antistatic properties were all good. Similarly, initial styrene copolymers used are oxidized styrene-butadiene

copolymers, styrene-allyl alc. copolymers, and polyester components were prepd. by using different amts. of reactants or by using 2,4,6-trioxo-s-triazine-1,3,5-(2H,4H,6H)- triacetic acid instead of I or including pentaerythritol, tall oil fatty acids, 2-ethylhexanol, and propylene glycol.

IT 29385-74-8

RL: USES (Uses)

(coatings of styrene interpolymers and, antistatic)

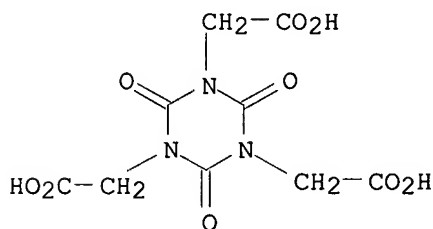
RN 29385-74-8 HCAPLUS

CN s-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo-, polyester with adipic acid and 2,2-dimethyl-1,3-propanediol (8CI) (CA INDEX NAME)

CM 1

CRN 1968-52-1

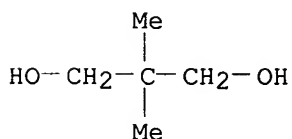
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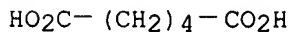
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CM 3

CRN 124-04-9

CMF C6 H10 O4



L36 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1967:465513 HCAPLUS

DOCUMENT NUMBER: 67:65513

TITLE: Coating compositions containing polyesters of 2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)-trialkanoic acid and a polyhydric alcohol, with a polyepoxide and an aminoplast resin

INVENTOR(S): Hill, Robert William; Galiano, Francis R.  
 PATENT ASSIGNEE(S): Gulf Oil Corp.  
 SOURCE: U.S., 4 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

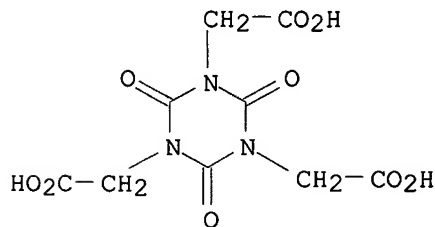
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3329738		19670704	US	19640908

AB The subject coatings are flexible, have good adhesion to thermoplastic substrates, cure at low temps., and are good barriers to solvent vapors. Thus, 414 g. 2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)tripropionic acid and 292 g. neopentyl glycol were heated 2 hrs. at 120.degree.. Adipic acid (68.5 g.) was added and heating was continued for 6 hrs. at 120-5.degree. and 3 hrs. at 145-50.degree. to yield a polyester (I) with 50-5 acid no. I was dild. with MeOEt to 80% solids, and 70 parts of this soln. was added to 30 parts MeOEt soln. (80% solids) of a com. epoxy resin (Epon 820). To this mixt., 20 parts 80%-solids soln. of hexamethylolmelamine hexamethyl ether in MeOEt and 10 parts dioctyl cresyl phosphate plasticizer were added to give a coating compn. (II). Triethylaminetetramine (1 part/20 parts epoxy resin) was added to II dild. to 30% resin solids. Polyethylene bottles were dipped into the catalyzed soln. and the coating was cured for 15 min. at 190.degree.F. to give a flexible film on the bottles which had good gloss, adhesion, and antistatic properties, and reduced losses of org. solvents contained in the bottles. Polyesters from 2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)-triacetic acid with 1,2-propanediol and pentaerythritol, other epoxides, e.g. tetrachloral-bisphenol A diglycidyl ether and glycerol triglycidyl ethers, and other aminoplasts, e.g. butylated melamine-HCHO resins and butylated dimethylolurea resins, are also blended into vehicles for coating polystyrene, acrylonitrile-butadiene-styrene copolymers, polyacrylonitrile, poly(vinyl chloride), cellulose acetate butyrate, and propionate, polycarbonate, and PhOH-HCHO resins.

IT 1968-52-1  
 RL: USES (Uses)  
 (polyesters with glycols or polyhydric alcs., for coatings)

RN 1968-52-1 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA INDEX NAME)



L36 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1967:55464 HCAPLUS  
 DOCUMENT NUMBER: 66:55464  
 TITLE: Synthesis of 5-alkyl-1,3-diallyl isocyanurates with functional groups in the alkyl residue

AUTHOR(S): Balitskaya, L. G.; Khomenkova, K. K.; Kornev, K. A.  
 CORPORATE SOURCE: Inst. Chem. High Polymers, Kiev, USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1966), 2(8), 1421-3  
 CODEN: ZORKAE; ISSN: 0514-7492

DOCUMENT TYPE: Journal

LANGUAGE: Russian

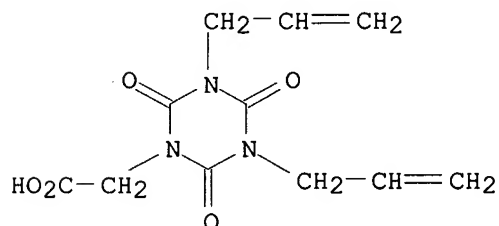
AB ClCH<sub>2</sub>-CO<sub>2</sub>Et and Na salt of diallyl isocyanurate (I) gave after 40 min. on the steam bath 96% 5-(carbethoxymethyl)-1,3-diallyl isocyanurate, m. 60.degree., which heated with concd. HCl 15 hrs. gave 33% carboxy analog, m. 90.degree.. I and BrCH<sub>2</sub>CH<sub>2</sub>OH in Me<sub>2</sub>NCHO heated 10 min. gave 80% 5-(.beta.-hydroxyethyl)-1,3-diallyl isocyanurate, m. 37.degree.; treatment with (CH<sub>2</sub>Br)<sub>2</sub> similarly gave 48% .beta.-bromoethyl analog, m. 31.degree. (also formed in the reaction was .alpha.,.beta.-bis[5-(1,3-diallylisocyanuro)]ethane, m. 64.degree.). I and CH<sub>2</sub>=CHCN in the presence of aq. Et<sub>3</sub>N gave in 3 hrs. heating 90% 5-(.beta.-cyanoethyl)-1,3-diallyl isocyanurate, m. 58.degree.. I and ClCH<sub>2</sub>-CH(OH)CH<sub>2</sub>OH in Me<sub>2</sub>NCHO in 1 hr. on a steam bath gave 5-(.beta.,.gamma.-dihydroxypropyl)-1,3-diallyl isocyanurate, b0.02 155.degree., n<sub>D</sub> 1.5210; bis-3,5-(dinitrobenzoate) m. 90.degree..

IT 13915-42-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 13915-42-9 HCAPLUS

CN 1,3,5-Triazine-1(2H)-acetic acid, tetrahydro-2,4,6-trioxo-3,5-di-2-propenyl- (9CI) (CA INDEX NAME)



L36 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1966:52129 HCAPLUS

DOCUMENT NUMBER: 64:52129

ORIGINAL REFERENCE NO.: 64:9750a-c

TITLE: Isocyanurate compounds and preparative processes

INVENTOR(S): Burdick, Donald L.; Osborn, Myron D.

PATENT ASSIGNEE(S): Gulf Oil Corp.

SOURCE: 3 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

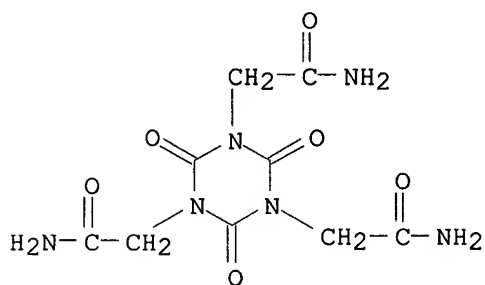
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3230220		19660118	US	19610424

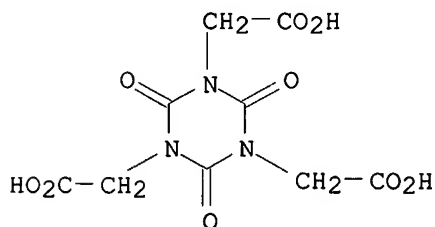
AB The title compds. are prepd. by treating trisodium cyanurate (I) with a halo-substituted acetonitrile or acetamide to form tris(cyanomethyl)isocyanurate (II) and tris(carbamoylmethyl)isocyanurate (III). These derivs. are hydrolyzed to tris(carboxymethyl)isocyanurate (IV), useful in the prepn. of polymers. Thus, 195 g. I in 200 ml. HCONMe<sub>2</sub> was heated to 95.degree. and treated, over 2 hrs., with 280.5 g.

ClCH<sub>2</sub>CONH<sub>2</sub> in 500 ml. HCONMe<sub>2</sub>. The mixt. was held 18 hrs. at 90.degree., cooled to give a ppt., and filtered off. The solid was washed with H<sub>2</sub>O and Me<sub>2</sub>CO to give 240.2 g. cryst. III, m. 350-1.degree.. III (5 g.) was refluxed 3 hrs. in 125 ml. concd. HCl to yield white cryst. IV, m. 264-6.degree.. ClCH<sub>2</sub>CN (19.5 g.) was added over 2 hrs. to 19.5 g. I in 100 ml. HCONMe<sub>2</sub> at 50.degree.. The mixt. was held 2.5 hrs. at 50.degree., cooled, and filtered. The filtrate was evapd. to dryness in vacuo and the residue triturated with 250 ml. of boiling H<sub>2</sub>O to give II, m. 232-4.degree.. II (2.6 g.) was refluxed 5 min. in 10 ml. concd. HCl to give 2.85 g. III. IV (91 g.), 53 g. propylene glycol, and 14.5 g. adipic acid was heated 3.5 hrs. at 140-50.degree. to give a polyester having an acid number of about 85. The polymer was dissolved in 150 ml. H<sub>2</sub>O contg. 8 ml. concd. NH<sub>4</sub>OH to give a transparent soln. contg. 50% by wt. of solids and showing a viscosity of X-Y (Gardner Scale).

IT 1843-48-7, s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo-  
 1968-52-1, s-Triazine-1,3,5(2H,4H,6H)-triacetic acid,  
 2,4,6-trioxo-  
 (prepn. of)  
 RN 1843-48-7 HCAPLUS  
 CN s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo- (7CI, 8CI) (CA  
 INDEX NAME)



RN 1968-52-1 HCAPLUS  
 CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA  
 INDEX NAME)



L36 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1965:403376 HCAPLUS  
 DOCUMENT NUMBER: 63:3376  
 ORIGINAL REFERENCE NO.: 63:619h,620a-c  
 TITLE: Isocyanurates  
 PATENT ASSIGNEE(S): Spencer Chemical Co.  
 SOURCE: 4 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable



FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 988631		19650407	GB	
DE 1195761			DE	

PRIORITY APPLN. INFO.: US 19610424

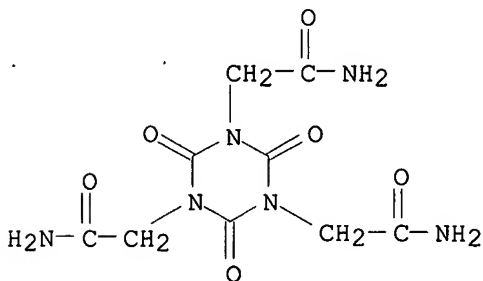
GI For diagram(s), see printed CA Issue.

AB The title compds. were prepd. by heating an alkali metal or a quaternary ammonium salt of cyanuric acid with halogenated AcNH<sub>2</sub> or MeCN at 50-150.degree. in an inert medium, and subsequent acid hydrolysis. Thus, to a slurry of 195 g. trisodium cyanurate (I) in 200 ml. HCONMe<sub>2</sub> heated to 95.degree., a soln. of 280.5 g. ClCH<sub>2</sub>CONH<sub>2</sub> in 500 ml. HCONMe<sub>2</sub> was added dropwise with stirring, the soln. kept 18 hrs. at 90.degree., and cooled to yield 240.2 g. cryst. tris(aminocarbonylmethyl) isocyanurate (II), m. 350-1.degree.. A mixt. of 5 g. I in 125 ml. concd. HCl was refluxed 3 hrs., and cooled to yield tris(carboxymethyl) isocyanurate (III), m. 264-6.degree.. Similarly, reaction of ClCH<sub>2</sub>CN with I gave tris(cyanomethyl) isocyanurate (IV), m. 232-4.degree. (MeCN). IV (2.6 g.) in 10 ml. concd. HCl refluxed 5 min. gave II. A mixt. of 91 g. III, 53 g. propylene glycol, and 14.5 g. adipic acid was heated with stirring 3.5 hrs. at 140-50.degree.. The polyester formed (acid no. .apprx.85) was dissolved in 150 ml. H<sub>2</sub>O contg. 8 ml. concd. NH<sub>4</sub>OH to provide a transparent soln. contg. 50% by wt. of solids. This soln. had a viscosity of X-Y (Gardner Scale). III is useful in the prepn. of its polymers (polyesters and polyamides) which in turn are useful in forming coatings, and molded plastic articles.

IT 1843-48-7, s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo-  
1968-52-1, s-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo-  
(prepn. of)

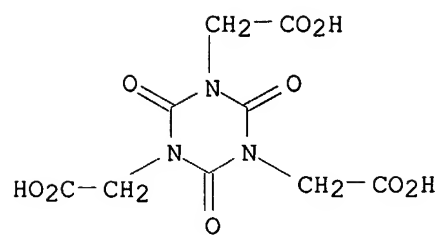
RN 1843-48-7 HCAPLUS

CN s-Triazine-1,3,5(2H,4H,6H)-triacetamide, 2,4,6-trioxo- (7CI, 8CI) (CA  
INDEX NAME)



RN 1968-52-1 HCAPLUS

CN 1,3,5-Triazine-1,3,5(2H,4H,6H)-triacetic acid, 2,4,6-trioxo- (9CI) (CA  
INDEX NAME)



# text/index searching

EPPERSON 10/071,707

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L1	107	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OSTRESH J?/AU
L2	5423	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	YU Y?/AU
L3	1022	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HOUGHTEN R?/AU
L4	6440	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3)
L5	19	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L4 AND ?TRIAZIN?
L6	5	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND "1,3,5-TRIAZINE"
L7	5	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND "1,3,5-TRIAZINO"
L8	9	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L6 OR L7)
L9	1	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L8 AND "2,4,6-TRIONES"
L13	4501	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	SOLID PHASE SYNTHESIS+PFT/CT
L14	1709	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HIGH THROUGHPUT SCREENING+PFT/CT
L15	2142	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	COMBINATORIAL CHEMISTRY+PFT/CT
L16	4858	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	COMBINATORIAL LIBRARY+PFT/CT
L17	4946	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	28-19/SC, SX
L18	11	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L14 OR L15 OR L16) AND L17
L19	11	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L18 AND ?TRIAZIN?
L20	1	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND ?TRION?
L21	56	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L14 OR L15 OR L16) AND ?TRIAZIN?
L22	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L21 AND ?TRION?
L23	1	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L22 AND ?TRIAZIN? (3A) ?TRION?
L24	1	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L13 AND ?TRIAZIN? (3A) ?TRION?
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L41	0	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L40 NOT L9

inventor search

l cited

all of these are the

inventor's citation

CT = controlled

terminology (indexing)

PFT = old, new, "used for" terms